

FEB 3 - 1945

Jan, 1945 - Nov. 1945  
Volume 8

# ARIZONA MEDICINE

*Journal of*  
**ARIZONA STATE MEDICAL ASSOCIATION**



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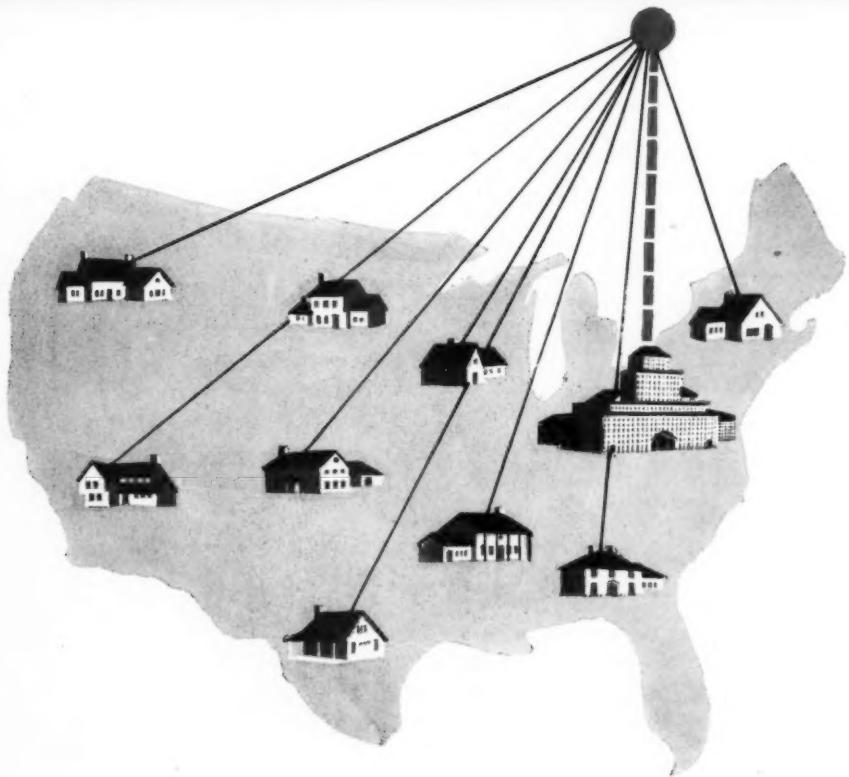
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January, 1945

Number 1-6

**9 out of 10 cases of EPILEPSY  
are treated in the home**

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16 1945

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for  
accessible  
infections



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# The Effectiveness of ANTISYPHILITIC THERAPY

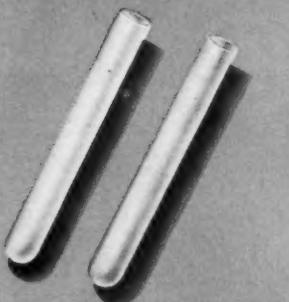
**depends**

not on disappearance of  
spirochetes alone



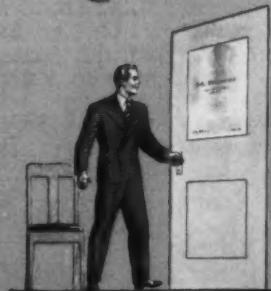
**nor merely**

the reversal of positive  
Wassermann reaction



**but on**

whether the treatment is such that within  
the shortest possible time the patient  
receives maximum protection against  
relapse and the infection of others.



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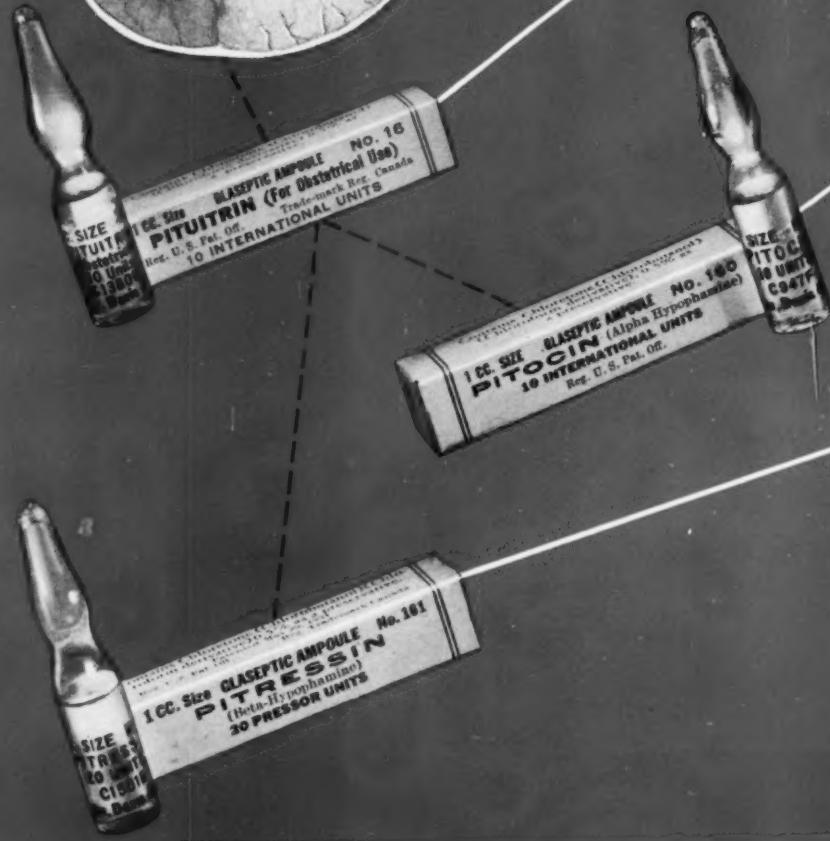
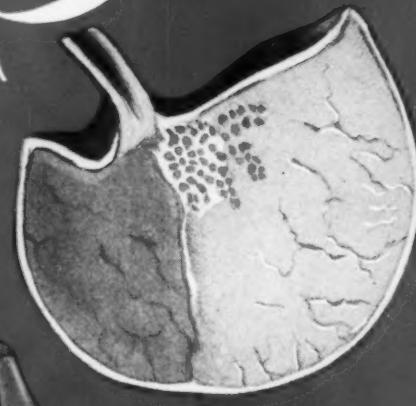
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# Selective POST-PITUITARY ACTION



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TRIUMPH OF

DILANTIN SODIUM

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<sup>1</sup> Tracy Putnam: Convulsive Seizures, p. 4, J.B. Lippincott Co., 1943.

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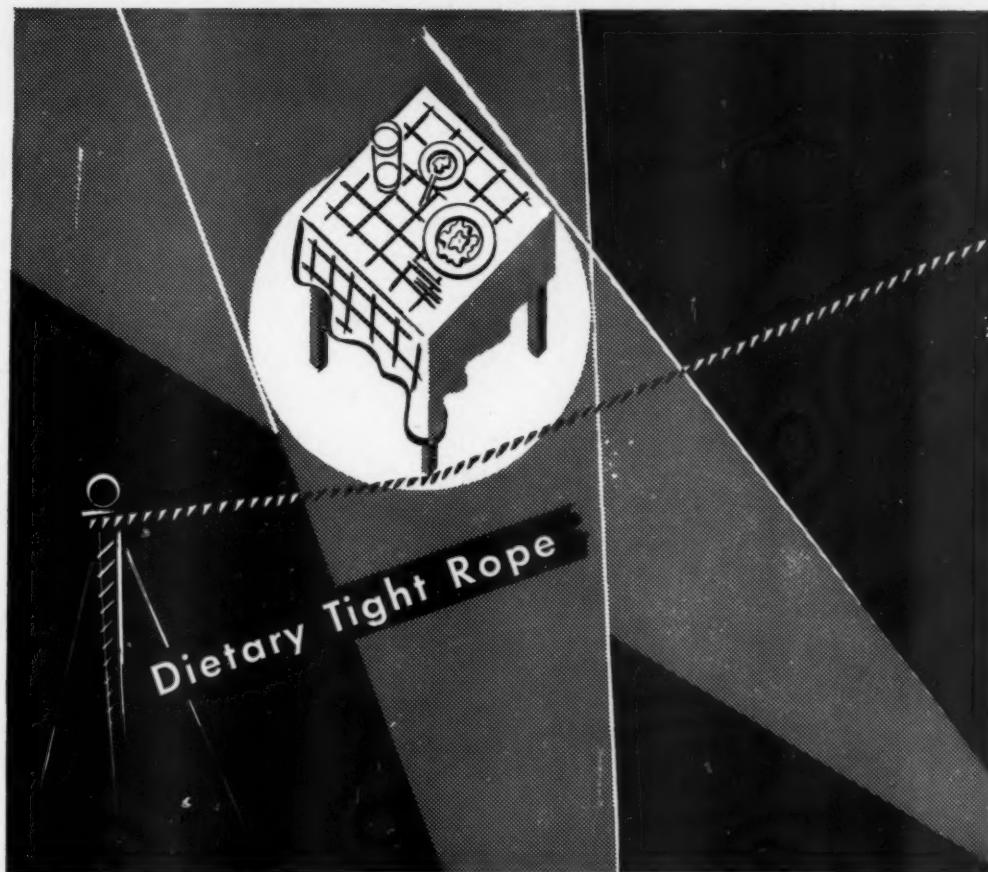
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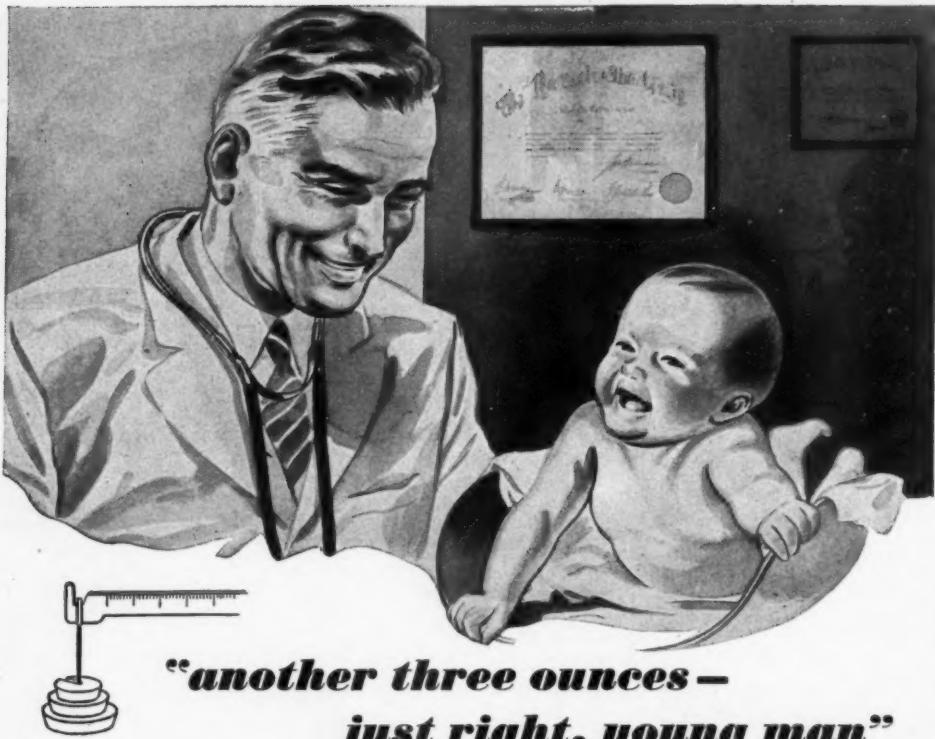
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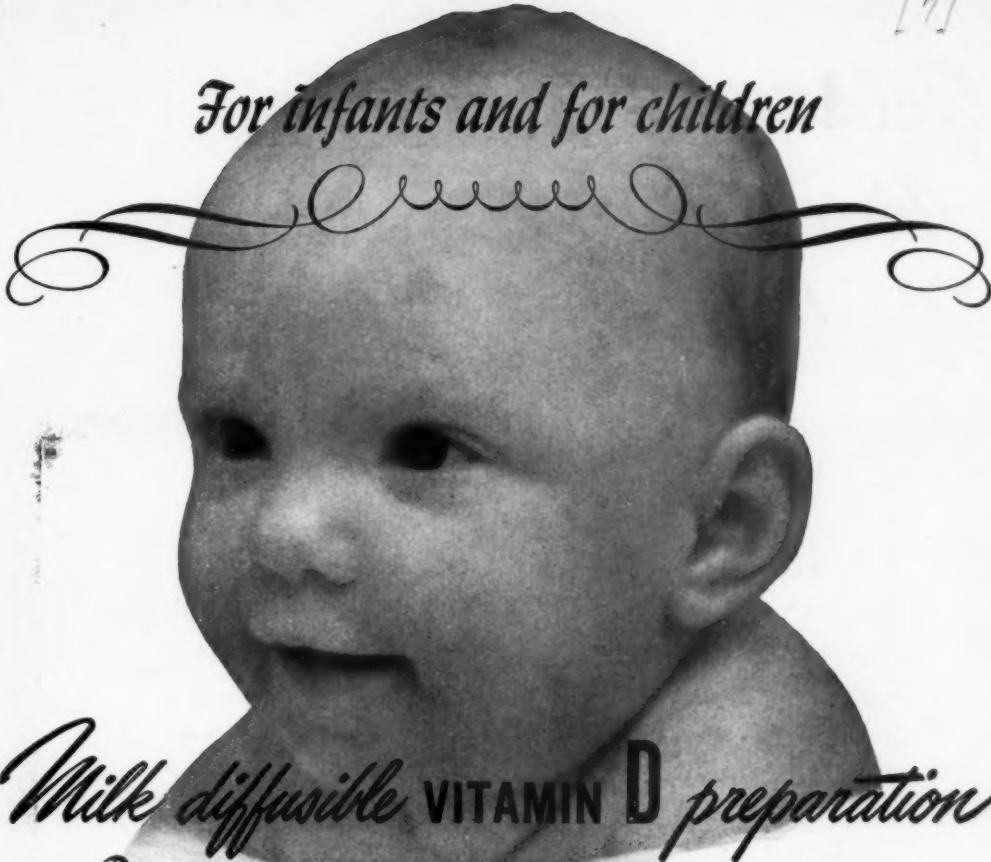


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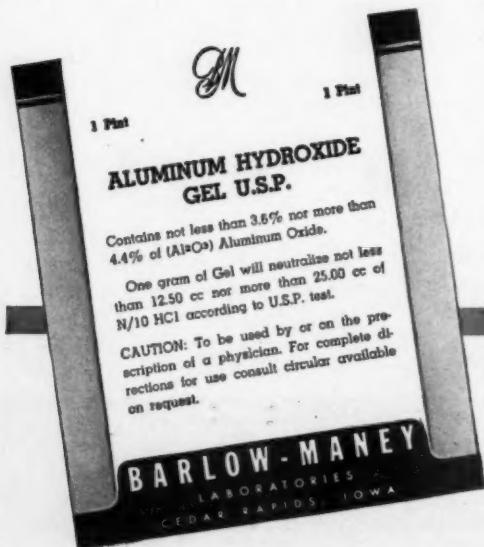
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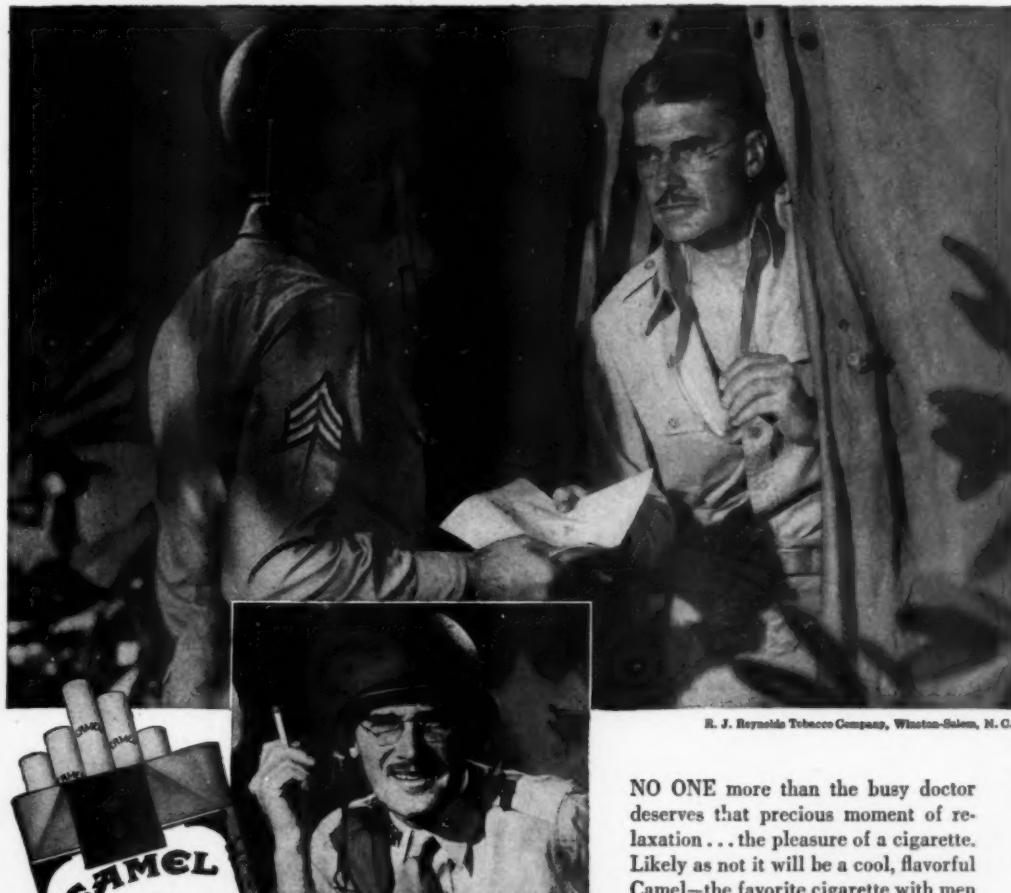
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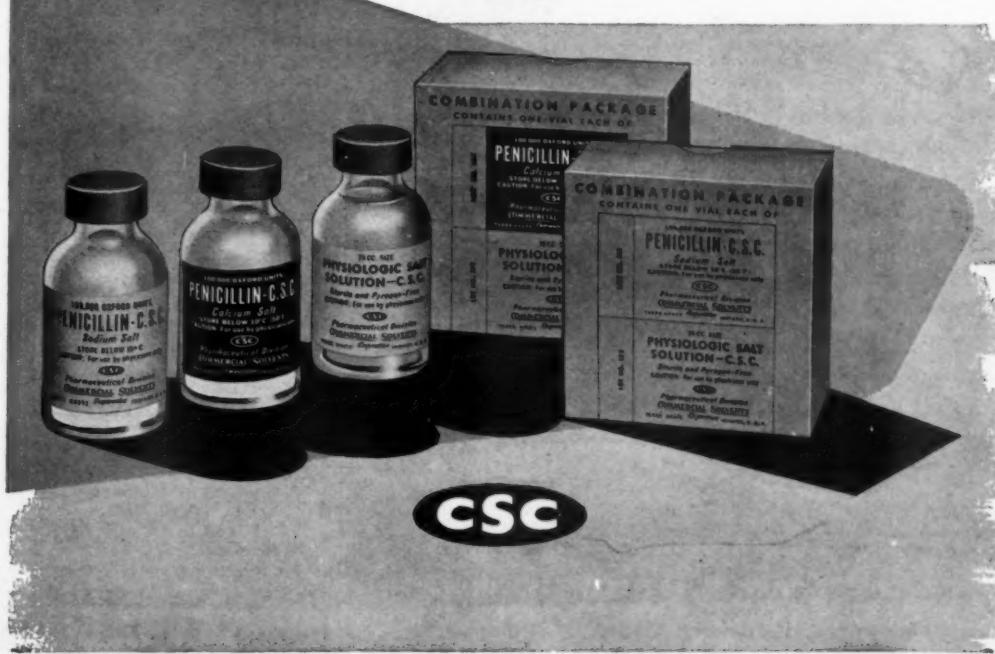
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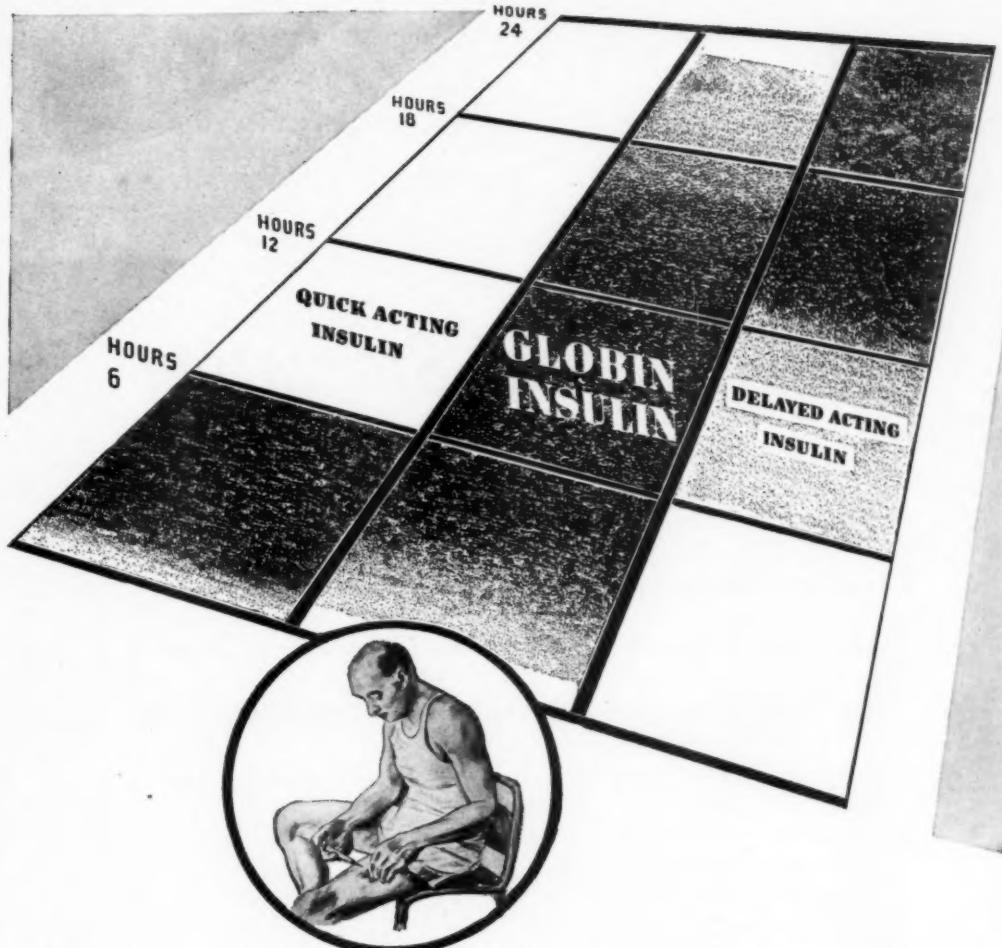
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\*"Surgeons are accustomed to attribute most of the postoperative weakness or asthenia to the operative procedure without realizing that much of it may actually be due to starvation, particularly deprivation of protein . . . the fall in plasma albumin begins with the very onset of a protein deficient diet . . . Solid food, as eggs and meat, should be added as soon as possible. Most postoperative patients can eat food much earlier than they are usually permitted to." Elman, R.: Acute Starvation Following Operation or Injury: With Special Reference to Caloric and Protein Needs, Ann. Surg. 120:350-361 (Sept.) 1944.



The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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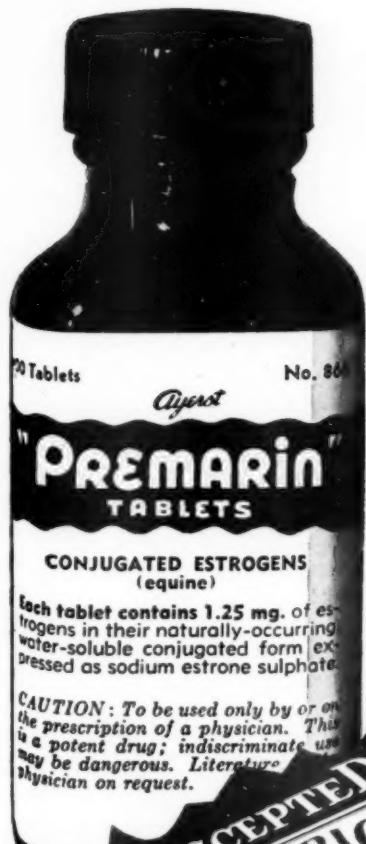
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\*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

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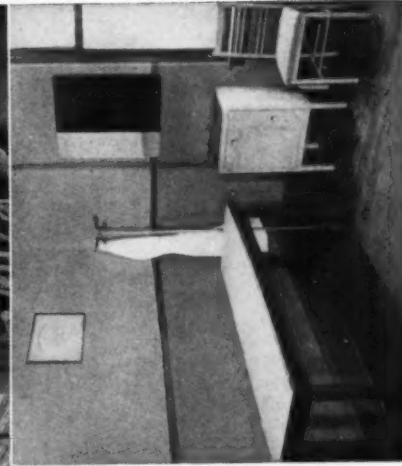
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## SILICOSIS

DR. FRED G. HOLMES  
*Phoenix, Arizona*

THE chief cause of the disability in silicosis is the dyspnea which in uncomplicated cases may begin in the second stage and become worse as the disease progresses. The cough, sometimes profusely productive but usually dry, which accompanies the dyspnea, is a lesser cause of disability. In very late stages, the right ventricular hypertrophy (cor pulmonale) or right heart failure with its dependent edema may cause some additional disability. Usually, however, the worker is quite highly disabled before the heart failure begins. At any stage, the toxemia and symptoms of tuberculosis may cause rapid and complete disability.

The evaluation of the disability of a silicotic is often very difficult. It is much more difficult if one add to the inherent uncertainties the possibility of lack of sincere cooperation, due to the attempt to obtain compensation. In most tests of pulmonary function, the complete cooperation and utmost effort on the part of the worker are necessary for the proper determination of disability.

Rapidly developing (acute) silicosis, coming on within a few years of a relatively brief exposure to massive amounts of very fine, almost pure silica dust, gives rise to great disability. It seems that such cases should be classified as one hundred percent disabled, since they get progressively worse and usually die within a very few years.

Cases of tuberculosis should also be classified as totally disabled, both for the protection of their fellow workers and to afford them the best chance of recovery. While the outlook in tuberculosilicosis is not favorable at best, the early cases can perhaps be cured, so treatment should be instituted as soon as the disease is discovered. It would seem that only in acute silicosis and tuberculosilicosis is disability clearly manifest.

In simple chronic silicosis great difficulty arises in the evaluation of disability. Most of these cases in the earlier stages appear healthy and complain at most of only a slight shortness of breath and a little cough. It is probable

that there is little or no disability in simple silicosis until the disease is quite far advanced; in fact, many authorities believe that even massive simple silicosis never gives rise to disability.

When a worker claims disability due to silicosis, however, the burden of proof that disability is not present rests on the employer or the insurer. A vast amount of work has been done and a great many tests devised in an attempt to find some means of dispassionately determining the extent of pulmonary incapacity. So far, the search has been unsuccessful, all tests requiring the cooperation of the worker.

A complete study of the worker is necessary. This study should include a complete analysis of all the phases of the respiratory function. The heart must be studied since diseases of the heart can cause disease of the lung or pulmonary dysfunction. The blood requires scrutiny since anemia or acidosis or other diseases affecting them can cause inadequate ventilation. Lastly, the nervous system must be checked since inadequate neural control of the musculature can in turn cause inadequate ventilation. When these factors have been eliminated or their part in the disability somewhat determined, the part played by the lungs may be evaluated.

A thorough examination of the chest including x-ray, is of course, a part of every method for the determination of disability.

Careful evaluation should include unobtrusive observation of the worker under all possible conditions: at work, climbing stairs, walking, etc. A decreased output of work on a piece-work basis is very suggestive of disability.

It is recommended that the reader consult the original article by W. S. McCann et al for readier understanding of some of the following recommendations appearing in that article.

The methods for evaluation may be divided into three groups: 1) Capacity measurements, 2) exercise tests, and 3) oxygen saturations tests.

1) The pulmonary capacity and its subdivisions give some evidence of the alterations in structure and function in the lungs. A decrease in total and in vital capacity of the lungs with an increase in residual air is usual in advanced silicosis. When the ratio of residual air to total capacity exceeds 40% it is definitely abnormal.

2) The best exercise test is, of course, the work that the worker is used to, since disability should be considered the inability to carry on normal work. Since this is usually difficult or impossible to do, it is necessary to use other tests. Simple tests such as running up and down stairs, running in place, etc., may give some indication of gross dyspnea. A better method is that of measuring the total ventilation during five minutes of exercise at the rate of 300 kgm. per minute and three minutes of subsequent rest. When this is done, the ratio of total ventilation to vital capacity is of great functional significance. The value of this ratio in normal men varies from 20-48 working at 300 kgm. Values above this are abnormal. Dyspnea is experienced when the value exceeds 55.

The estimation of pulmonary reserve at definite rates of work gives an excellent index of functional ability. Normal men have a pulmonary reserve of 55-73% when working at 300 kgm. per minute, when they are using 27-45% of their maximal ventilatory capacity. Dyspnea is experienced when 50-60 of the% of the maximal ventilatory capacity is used.

3) There is a failure on the part of silicotics to attain a degree of oxygen saturation of the blood commensurate with the alveolar oxygen tension. This failure is accentuated by the breathing of low-oxygen mixtures; e.g., 17% oxygen rather than the normal 20% oxygen mixture of the air. This method has not yet been correlated with other methods of estimating disability.

It seems evident that no one method is sufficient for a satisfactory evaluation and ability.

#### COMPLICATIONS

*Tuberculosis:* The chief complication of silicosis is tuberculosis; estimates of its incidence running as high as 75%. The death rate from tuberculosilicosis in certain industries is as high as ten times that in the general population. Whether the infection takes place before

or after the pulmonary fibrosis of silicosis occurs is still a debated point, but most authorities believe that tuberculosilicosis usually arises from the reactivation of a previously quiescent infection. For this reason, no known cases of tuberculosis, whether "healed" or open, should be employed where there is dust exposure. All silicotics should be protected also against contact with known cases of tuberculosis.

Most cases of tuberculosilicosis are in the older group of workers, the highest falling in the forty to fifty age group. Negroes are especially susceptible.

*Pneumonia and other Acute Infections:* Silicotics seem to be more susceptible to acute respiratory infections than are normal persons. They have more pneumonia, more 'colds', and more lung abscesses than is normal. These complications do not seem to be especially hard to treat although there is a tendency toward permanent consolidation in cases of lobar pneumonia. Lung abscesses arising in the partially devascularized fibrous tissue, are probably more common than generally realized.

*Spontaneous Pneumothorax:* Silicosis is one of the most common causes of spontaneous pneumothorax. The emphysema, the formation of emphsematous blebs and the almost constant cough lead easily to this condition. This tendency is partially compensated for by the obliterative (non-infectious) commonly seen.

*Cancer:* Whether the irritative influence of silica dust will cause bronchial carcinoma is debatable. Extensive statistical studies seem to indicate, however, that the incidence is no higher in silicotics than in the general population. Since the chief result of silica inhalation is a connective tissue proliferation, the formation of connective tissue tumors should result if silica is carcinogenic, but such tumors have not been reported.

*Cor Pulmonale:* Right ventricular hypertrophy or failure is seen in about half of the far advanced cases of silicosis. It is the most common cause of death in those cases which do not develop tuberculosis. The onset of heart failure is usually a terminal event. Since most patients who develop this complication are in the age group in which vascular and cardiac changes take place in the normal individual,

the part played by the silicosis in this complication is somewhat doubted, but the fibrous obliteration of the pulmonary capillary bed could easily result in right heart failure.

*Bronchitis and Bronchiectasis:* Bronchitis is a very frequent and chronic complication of silicosis, due probably to the irritative effects of the larger particles of silica. It usually clears up on the cessation of exposure. Bronchiectasis is not too uncommon a complication.

#### TREATMENT

There is no known treatment which will remove fibrosis once developed in the lungs. For this reason, there is no specific treatment for simple silicosis. Removal from exposure to the dusts is advisable in any case in which the silicosis is progressing rapidly; i.e., in which fibrosis has occurred after only a few years of exposure. It is doubtful whether the removal from exposure will stop further progression of the fibrosis since nodules present will continue to enlarge but there will be no

new nodules. In those cases in which exposure has been long continued and the disease is still in its early stages, removal from exposure will not help the worker and may cause serious social and economic upheavals. Bed rest may cause some relief from symptoms. The remainder of the treatment must be purely symptomatic.

Tuberculosilicosis is much more difficult to treat than is tuberculosis unassociated with silicosis. The patients respond quite poorly to any kind of treatment. Even very early cases are very chronic and long continued treatment is essential. Collapse therapy may prolong the life of the individual but it also may shorten it appreciably, probably because of the already greatly reduced pulmonary reserve.

The treatment of the other complications differs little from that which would be used for cases without silicosis. All treatment may be less effective because of the lowered resistance of the silicotic.

15 E. Monroe.

## THE Rh FACTOR; PRACTICAL ASPECTS

By R. J. JENNITT, M. D.  
Phoenix, Arizona

FEW recent medical problems have prompted as much research and as many papers as the problem of the Rh factor. The confusion exists, not because it is such a complicated subject, but because we allow ourselves to be frightened by such terms as "isohemoagglutination", "agglutinogen", "isoimmunization" and so forth. The purpose of this paper is not to add anything new concerning the knowledge of the factor, but is an attempt to summarize as clearly and concisely as possible the known facts concerning it.

A clear understanding of the main blood groups is necessary before the Rh factor can be intelligently discussed and so a brief review is in order. According to the work done by Landsteiner and as proved by countless experiences with blood transfusions, all human blood can be divided into four main groups, depending on the presence or absence of two agglutinogens, or, as they might better be called, factors. These factors, or agglutino-

gens, are located in the red blood cells and have been named "A" and "B". The blood groups are named according to the factors contained in the red blood cells. Blood with cells containing the "A" factor are termed "Group A", and those containing the "B" factor "Group B". Those which contain both factors are called "Group AB", and those which contain neither, by far the most frequent, are termed "O", or lacking agglutinogens. Now there also exists—present in the serum, agglutinins or anti-bodies, or anti-"A" agglutinins or anti-"B" agglutinins which are capable of agglutinating the blood cells containing the corresponding factor. Now it is obvious that blood of any given individual can not contain "A" factor in its cells and anti-"A" agglutinins in his serum. Therefore it was postulated and proven beyond doubt that "A" blood contains anti-"B" agglutinins and conversely "B" blood contains anti-"A" agglutinins. It was also shown as would be expected that "AB" blood contained neither of the agglutinins. Lastly of all "O" blood, blood

containing neither "A" or "B" factors, contains both anti "A" and anti-"B" agglutinins. It is important in later understanding of the Rh factor to note that the anti-"A" and anti-"B" agglutinins occur naturally and spontaneously and constantly. The discovery of these facts has made possible the wide spread use of blood transfusion.

Following the epic work of accurately classifying the various blood groups according to the factors contained in the blood cells, it became obvious that in addition to these two major factors which determined the four major blood groups, there were additional factors of much less importance but which still must be reckoned with. Two of these more minor factors are named "M" and "N" and occurred at random in all the four major groups. These proved to be of very little practical importance. Landsteiner<sup>1</sup> and Wiener in further work discovered another factor which has proved very practical: This factor, or agglutinogen, they named the Rh factor. It was discovered when the workers noted that a serum developed to agglutinate the red cells of Rhesus Monkeys, also agglutinated the red cells of approximately 85% of human blood samples. Since this demonstrated a factor in human blood that was identical with that found in the blood of all Rhesus Monkeys, it was named Rh factor instead of P, D or Q, or any other letter that might have been selected. As stated this factor or agglutinogen occurs in about 85% of the white population of the United States and these individuals for discussion's sake are termed Rh positive. The remaining 15% whose red blood cells do not contain this factor are termed Rh negatives. The Rh factor is found at random in blood cells of all the major groups. The Rh factor is found at random in blood cells of all the four major groups. The Rh factor has two characteristics from which it derives its main significance and importance. The first of these is that anti-Rh agglutinins, or anti-bodies, never occur spontaneously in Rh negative blood. This is in sharp contrast to the major "A" and "B" agglutinogens for which natural agglutinins exist. A second characteristic, and stemming from the first, is that although natural anti-Rh agglutinins do not exist, the Rh factor is a very potent anti-gen and when introduced into the system of the individual

not possessing it, a strong immunization action is set up and high anti-Rh titers are developed. If blood containing the Rh factor is again introduced into the same subject as occurs in repeated blood transfusions, an interesting train of events will occur, as will be discussed later. It is also important in understanding the role of Rh factor in hemolytic disease of the newborn to note that it is transmitted to the offspring as a Mendelian Dominant characteristic.

Before discussing the role of the Rh factor in blood transfusion, allow me to digress and say a few words about transfusion reaction in general. The first type is the all too familiar pyrogenic reaction with which we have all had ample experience. This is in reality not a true blood transfusion reaction, since it is done to a contaminant usually present in the apparatus and can occur with the administration of any parenteral fluid. Except for a severe chill, subsequent fever and a few anxious moments on the part of the physician, no real damage occurs. The same can not be said of true transfusion reactions. When incompatible blood cells are introduced into the blood stream, the antibodies in the recipient's serum produce two actions on the foreign cells. The First is agglutination. Because this process can be so easily demonstrated in the laboratory, it is the basis of blood typing and cross matching methods. However, the Second action, that of hemolysis is even more important and is responsible for the complications which follow a true reaction. In severe cases the blockage of the kidney tubal with acid hematin may be fatal. In less severe cases it is followed by a demonstrable hemoglobinuria.

The role of the Rh factor in blood transfusion reactions can now be summarized. When an Rh negative individual is repeatedly transfused with Rh positive blood, the first transfusion will produce no trouble since the anti-Rh agglutinin does not exist naturally. However the Rh factor in the transfused red blood cells will set up the process of isoimmunization and anti-Rh agglutinin will be produced and be present in the recipient's serum. If enough time is allowed to elapse for the titer to attain a sufficiently high level, and cells containing the Rh factor are again introduced by using an Rh positive individual as the donor,

a transfusion reaction of varying severity will occur. If enough of the blood enters the circulation, it may be fatal even though the blood be of the same major group and were demonstrated to be compatible in the standard cross match test. The studies of this action of the Rh factor were done mainly by Wiener<sup>2</sup> and illustrated the cause for the majority of the intra-group transfusion reactions occurring in patients receiving repeated blood transfusions. It may be asked here why the incompatibility due to the Rh factor was not shown in the standard cross match as would be expected. The reason is that agglutination due to anti-Rh agglutinins ordinarily does not take place at room temperature, the conditions under which the ordinary cross match is done. It can best be demonstrated at body temperature or approximately 37.5 degrees centigrade. In addition to this, it usually requires an agglutination test carried out in test tubes along with centrifuging of the specimen.

Following the explanation for the reason of the majority of intra-group transfusion reactions following repeated transfusions, there remains a second class of intra-group transfusion reactions which occurred following first transfusion and occurred mainly in pregnant women or soon after delivery or abortion. Further work chiefly by Levine<sup>3</sup> gave rise to a very logical explanation and also offered a workable theory to the etiology of the majority of cases of erythroblastosis foetalis. In the making of an Rh positive husband and a Rh negative wife, the Rh factor being dominant, the foetus is also Rh positive. It was postulated that the Rh factor being dominant, the foetus is also Rh positive. It was postulated that the Rh antigenic substance from the red blood cells of the foetus was transferred through the placenta to the mother's circulation and there set up the same isoimmunization process as occurred in the transfusion of the Rh positive blood to an Rh negative individual. The mother then had the Rh agglutinins in her serum. If she then receives a transfusion from an Rh positive donor, a typical transfusion reaction may take place. Experimental evidence bears out this theory.

Following the demonstration of the isoimmunization of the mother from substances passing from the foetus to the mother, it was evident

that the same process could take place in reverse, namely, the transmission of the anti-Rh agglutinins from the mother to the foetus. It was especially logical since it had previously been demonstrated that such a condition does exist with such immune bodies as those from measles. If this occurred, it would be natural that the anti-Rh agglutinins could have a very damaging effect on Rh positive foetus. Levine and his co-workers<sup>4</sup> investigated this and showed statistically that in at least 90% of cases of proven erythroblastosis foetalis, the father was Rh positive, the mother was Rh negative, and the foetus Rh positive. The accompanying diagram attempts to demonstrate the theory of the mechanism of this process. If a sufficiently high titer of anti-Rh agglutinins is attained in an Rh positive foetus, it could easily set up the chain of events of anemia, jaundice and hydrops in the foetus.

From the foregoing discussion, certain very practical applications will be evident.

- I. In transfusing a Rh negative individual, ideally an Rh donor should be used, especially so if patient is receiving repeated transfusions.
- II. If facilities for Rh typing are not available, at least a warm cross match at 37.5 degrees centigrade should be done.
- III. In pregnant or post partum women, it becomes especially important to use Rh negative blood for Rh negative recipients and even more so if there is any suspicion whatever of erythroblastosis foetalis. As a general rule a husband should not act as a donor for a pregnant or post partum woman.
- IV. Infants suspected of having erythroblastosis foetalis should always be given Rh negative blood and should not be given mother's blood with its anti-Rh agglutinins, unless it is given in the form of washed red blood cells.

In addition to these precautions directly related to the Rh factor, there are two other precautions which should be taken following any transfusion reaction, and as far as I can find are not commonly done in any of the local hospitals.

I. If any patient who has had any type of transfusion reaction, even though it is suspected to be pyrogenic in origin, a urinalysis for hemoglobin should be done using one of the various chemical test of which Meyers' test is probably the best.

II. Probably a wise precaution in any transfusion reaction is to give large doses of an alkaline substance in an attempt to alkalinize the urine and minimize the formation of dangerous acid hematin.

926 E. McDowell.

FIGURE I

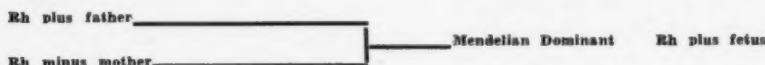
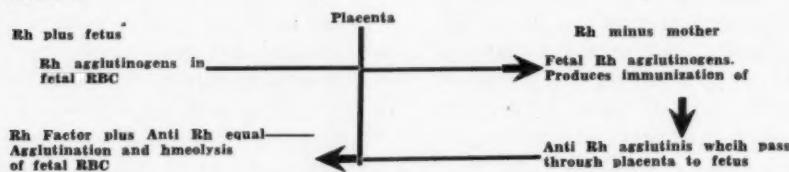


FIGURE II



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## GANGRENE OF THE THIGH

(Case Report)

HENRI S. DENNINGER, M. D.

Glendale, Arizona

ON April 28, 1943, at about 10:00 A. M. the patient, a 43 year old white male, suffered a severe laceration and crushing and contusing of the muscles on the outer side of the right thigh. This injury was incurred when he slipped on a rafter and his leg fell down into the revolving clutch on the overhead power drive on a feed mill. He was given emergency first aid treatment by a local doctor and sent to Good Samaritan Hospital. Approximately twelve hours elapsed before he received any further medical attention.

This patient was first seen by me that evening. There was a large V-shaped incision on the outer side of the right thigh, both arms of the V about fourteen inches in length, the apex pointing toward the knee. Seven inches back from the apex all the skin was necrotic and greyish green in color. At the upper end of

the flap gas could be detected on palpation. It should be noted here that the entire wound had been sewed up, and that an opening in the lower part of the thigh had been made and a small gauze drain inserted. As far as could be determined the above procedure and the administration of 1500 units of tetanus antitoxin constituted the initial treatment.

The patient was given 10,000 units of gas-gangrene anti-toxin, and Dr. Henry Williams was called in consultation. Deep X-ray therapy was started immediately and following the first treatment, the patient was taken to surgery (4-29-43). By this time he was very toxic, with a temperature of 100°, pulse of 130, and the definite odor of gas gangrene was present. At this operation, the wound was opened in its entirety and exposed a greyish green putrid mass of muscle and fascia. The necrotic macerated portions were gradually dissected free, down to what appeared to be good healthy muscle tissue.

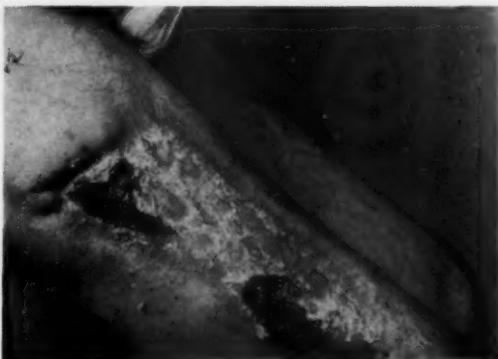


Plate No. 1. This photograph was made January 5, 1944, and indicates the extent of successful skin grafts at that time. The small narrow bridge of skin in the lower portion of the wound broke down before the next operation was performed.

A small strip of the fascia lata was left intact. In cleaning the wound, it was found that numerous pieces of hay, seed, grain and other foreign material had been sewed into the wound without any apparent attempt at cleaning. Following debridement the wound was irrigated with normal saline solution, and approximately 45 grams of sulfanilamide powder was sprinkled into the wound. Hemostasis was secured, and the wound covered with gauze. A small drain was inserted in the pocket extending downward on the lateral side of the knee and opening below the head of the fibula.

The patient was returned to the room in fair condition; and his condition for the next five days was serious but not critical. Then, on May 6, 1943, further debridement was decided upon, as the condition of the wound appeared to be getting worse and there were numerous pockets of pus and fresh necrotic material. Under pentothal anesthesia, practically all of the fascia lata was removed from the lateral side. All the remaining portions of the vastus lateralis muscle were removed as well as all the muscle tissue adjacent to the femur in its lower two-thirds of the thigh. The wound was then thoroughly irrigated with saline and a large skin flap was removed from the upper portion of the wound, exposing the muscles under the iliac crest. These muscles were then divided longitudinally with incisions and thoroughly irrigated with peroxide and sprinkled with sulfanilamide. It must be realized that practically the lower lateral half of the femur was completely exposed. The day following this oper-

ation, the patient had a severe chill and the rectal temperature was recorded in the late afternoon at 107.6°. Following this his temperature dropped to around 100 to 101, and in six days returned to a normal level, to stay there during his remaining time in the hospital.

Aside from these operations, I believe that treatment in general can best be established by tabulation.

1. Gas gangrene antitoxin—From April 28, to May 13, 1943. Antitoxin was given, 2cc every three hours day and night, totaling 300,000 units.
2. Blood transfusions — Fifteen blood transfusions; one of 500cc following the first debridement, followed by fourteen of 250cc each given as indicated up to May 20, 1943.
3. X-ray therapy — April 29 to May 3, 1943. Three treatments at 50R units each and three at 100R units. X-ray therapy was discontinued because the roentgenologist in charge felt that therapy was rather futile for a "dead person."
4. Blood counts showed nothing characteristic for the condition, except for the white blood count, which went over 24000 during his critical period.
5. Wound cultures—4-30-43 Positive for Clostridium Welchii.  
5-23-43 No growth after 60 hours.  
5-29-43 Slight growth of Clostridium Welchii.

After this the next six cultures were



Plate No. 2. This photograph was made April 1, 1944, approximately two months after the second skin grafting operation. The wound is now completely covered, and all new skin is healthy in appearance. There has been marked improvement in the skin texture and return of sensation in the five months that the patient has been at work.

negative, there having been fourteen in all.

#### 6. Care of the wound:

- (a) Intramuscular oxygen: This was given by having oxygen flow into a tube which branched and terminated in six large intravenous needles, which were inserted into various portions of the remaining muscle crevices and pockets. The amount of flow was determined by having it bubble through water. After using all one night it could be safely said that the next morning the patient was thoroughly oxygenated, because crepitus could be detected anywhere and everywhere on his body. This method was changed and oxygen was administered only one half hour, three to four times a day.
- (b) The wound on the thigh was irrigated with Dakin's solution three times a day. However, in time this caused considerable pain and distress. Therefore in order to continue the beneficial effect of this irrigation the wound was first treated for about ten minutes with 1% novacain solution. As granulation tissue began to fill in the large defect in the thigh, triple analine dye was applied to the upper portion of the granulating wound.
- (c) Sulfathiazole powder, crystals and ointment were tried on other portions of the wound. The crystals seemed to help the general condition at first, but later appeared

of no value, and as the wound gradually became clean and free from infection, urea crystals were sprinkled on about twice a day, and seemed to greatly augment the production of granulation tissue.

On June 15, 1943, the patient was removed from all isolation precautions, and on June 20, was allowed up in a wheel chair. The same day extensive hives developed over the entire body and lasted three days—but were successfully controlled by adrenalin injections as needed. On August 28, 1943, a surgical repair was done of the skin defect overlying the newly developed granulation tissue with twenty-six Tiersch grafts, covering an area 11½ by 4 inches. These grafts, taken from the abdomen, were covered with perforated cellophane and given further general care. All twenty-six grafts were successful: see plate No. 1. On January 27, 1944 the lower portion of the wound was skin grafted with 51 Tiersch grafts, covering an area 14 by 2 inches. These proved very successful, and only a few of the entire number were lost. On March 10, 1944, the patient was discharged from the hospital; at this time the wound and all the skin grafted region were in excellent condition, and were kept moist with a thin film of Vitamin A and D ointment. The results of this therapy are clearly seen in Plate No. 2. On June 23, a perforated plate of heavy aluminum was fitted over the wound, and the sides protected by padding, so that the patient could wear trousers and feel protected against any injury to that portion of the thigh. He was given several weeks in which to accustom himself to the wearing of this protective brace, and on July 11, 1944, he returned to his usual work.

107 East A Ave.

## PENICILLIN IN AN UNUSUAL CASE OF PERITONITIS

W. H. OATWAY, JR., M. D.

*Tucson, Arizona*

THE rapid and complete action of penicillin on general and focal infections is of current interest. Certain cases illustrate its effect in situations which have been considered desperate and even hopeless. The present case is a local example of a remarkable result.

The patient was a white female child of 28 months. She had been normal until the age of 22 months. At that time a series of respiratory infections resulted in a nephrotic syndrome which became progressively more severe. Blood, urine and physical signs were typical. Sulfadi-

azine and sulfamerazine were successfully used to control the febrile respiratory infections. Penicillin failed to clear a pneumococcus type VI pharyngitis, and the organism was found to be penicillin-resistant in vitro. Treatment with thyroid extract was not helpful; transfusion was of some supportive value. The child was then in the care of Dr. Rustin McIntosh, of Babies Hospital in New York City, and Dr. John Lytle, now of Children's Hospital in Los Angeles.)

In an effort to reduce the frequency of respiratory infections, the child was brought to Arizona by airplane in June 1944. (She was referred by Dr. Vivian Tappan of Tucson, then in New York.) Nausea, vomiting, and diarrhea occurred throughout the trip on the plane, subsided 24 hours after arrival and recurred 24 hours later. Edema of the legs and face was moderate, but there was a considerable ascites present.

On the 5th day after arrival, the food intake was fair, the stools were loose, but mucus was the only abnormality. The temperature then abruptly rose to 103° rectally. The symptoms of fever, the mild diarrhea, and emesis during a 12 hour period were the only points in progress.

Sulfamerazine (2 gm. per 24 hours) was started, and the tolerance was good. Kaopectate and a semi-liquid diet were given. An enema tip or a tidal-wave easily controlled the tympanites. No change in the signs, symptoms or fever occurred, except a possible slight increase in the ascites. A urinalysis showed three plus albumen but no infection.

On the 3rd day of fever it was decided to remove the accumulation of peritoneal fluid. An

epidemic of entero-colitis in the community, and in several eastern cities, was current. Aspiration might relieve pressure on the colitis, reduce the respiratory embarrassment, and exclude a possible source for the fever.

One thousand cc. of slightly cloudy fluid was removed from an area below the umbilicus. The total ascites was probably reduced by two-thirds. The needle tract drained for three days and then closed.

Cultures containing para-amino-benzoic acid showed a growth of staphylococcus (later identified as albus) from both specimen tubes. The organism was therefore sulfa-resistant and the use of sulfadiazine was stopped. The white blood count was 23,700 with a neutrophilia and a predominance of young cells.

Penicillin was administered at once, 10,000 units being given intramuscularly in the first dose, followed by 5,000 units every three hours until 100,000 units has been given. There was no untoward reaction.

The temperature, which had ranged between 101.8° and 105.6°, dropped to 98.4° fifteen hours after the first dose of penicillin, and did not rise above normal thereafter. The Clinical condition slowly improved, and the food intake and bowel functions approached normal during the first week after lysis of the fever. The edema gradually decreased, but the ascites again increased. (The albuminuria was then about 14 gm. with an A\*G ratio of 0.7.) Thirteen days after the first aspiration, a second abdominal paracentesis produced a fluid which was almost clear, and which was negative by culture at 48 hours. The later course was that of an improved neperosis.

## PENICILLIN IN EAR, NOSE AND THROAT

DR. W. H. WOERN, M. D.  
*Phoenix, Arizona*

**B**ECAUSE of the difficulties connected with the administration of Penicillin and the ease of administering Sulfanilimide derivatives, the use of Penicillin with the average case of ear, nose and throat infections, has not been extensive.

Presented before the Staff of St. Joseph's Hospital, Dec. 11, 1944.

Excepting for the acute stage of an ordinary cold, Penicillin and the Sulfanilimide drugs have little or no effect in the average sinus infection. If we could maintain the normal function of the nasal structures throughout the common cold, we would probably have little or no sinusitis. It is necessary in treating a case of sinus infection to restore the physiology of

the nose rather than to control the infection. The use of tampons, antrum lavage, displacements, heat, suction, x-ray therapy, chemo-therapy and vaccines will clear up most cases varying the treatment as seems indicated. Allergy is probably the captain of the causes of chronic sinus infection and it must be controlled before relief can be expected. There should be close cooperation with the allergist. Less extensive surgery, as submucous resection and antral windows may be indicated to obtain permanent end results. It does not seem that the miracle medicines will do this.

Of course it is understood Penicillin is reserved more for the overwhelming infections for which everything else has failed. Using Penicillin for those cases that respond badly to other measures, and continuing it with the Sulfanilamide drugs, and the other measures at our command, we probably gain our objective by the added effects of the Penicillin rather than by it alone. I think this was definitely born out in a recent case of ethmoid abscess. In this case Sulfanilamide, antral lavage and nasal tampons were maintaining a normal temperature without pus formation for some ten or twelve days at which time all were stopped and Penicillin was given alone. Pus was present with bony necrosis and temperature rise after seventy-two hours. This patient received 1,250,000 U. in five days with what seemed like bad end results. Staphylococcus toxoid then produced very nice results in two weeks, with cessation of drainage in a month. The literature stresses the fact that surgery will probably be necessary, and that the best results are postoperative.

Complications of sinus infection such as osteitis of the sinus wall, extra dural abscess, meningitis, brain abscess, orbital cellulitis, and blood stream infections show better results with Penicillin and the Sulfanilamide drugs than uncomplicated sinusitis.

Local application of Penicillin, sprays and gargles have been found, effective in relieving the common cold. The duration has been shortened to two or three days in a high percentage of cases and the symptoms have subsided early. Sinusitis is much less common.

Uncomplicated acute infections of the middle ear seem to respond very readily to Penicillin with absolute cure. But chemotherapy is the

measure of choice because the patient can take his medication at home without an attendant and it controls the greater part of cases. Chronic draining otitis media seems to respond well to lavage of the ear, Sulfanilamide, x-ray and vaccines, except an occasional case which will require surgery. Penicillin may give very good end results. It seems probable that it would not prevent recurrent attacks of drainage when the perforation of the drumhead persisted and the Eustachian tube remained open leaving the individual exposed to subsequent infections from the nose or from the outside.

Complications of otitis media, extra dural abscess, meningitis, brain abscess, lateral sinus thrombosis, and blood stream infections are definite indications for Penicillin together with extensive surgery.

Penicillin probably has not been used with throat infections, but it should give equally as good results as Sulfanilamide, or better.

Now in closing it is reported that frequent local applications of Penicillin to the nose and throat will shorten the duration and lessen the symptoms and complications of a common cold.

Penicillin will relieve the pain and fever in acute sinusitis, but it probably will not bring complete relief.

Penicillin in chronic sinusitis probably is of as little effect as Sulfanilamide. Complications of sinusitis should receive Penicillin. Acute middle ear infections respond very well to Penicillin. Chronic otitis media is not markedly improved. Complications of middle ear infections should be operated and receive Penicillin. Penicillin should supplement other treatments rather than replace them. Penicillin is non toxic and may be used in place of Sulfanilamide when complications as nephritis are present.

15 E. Monroe.

#### VITAMIN ADVERTISING AND THE MEAD JOHNSON POLICY

The present spectacle of vitamin advertising running riot in newspapers and magazines and via radio emphasizes the importance of the physician as a controlling agent in the use of vitamin products.

Mead Johnson & Company feel that vitamin therapy, like infant feeding, should be in the hands of the medical profession, and consequently refrain from exploiting vitamins to the public.

## Cancer Section

### BASAL-CELL EPITHELIOMA

Ludwig Lindberg, M. D.  
Tucson, Arizona

The typical basal-cell epithelioma is perhaps the most common of all malignant tumors.

Basal-cell epithelioma may originate from the basal cells of the epidermis, from hair follicles or other skin appendages. This tumor is limited to the skin; it does not appear primarily in the mucous membrane although it may invade this structure secondarily. Some investigators believe it originates solely in the hair matrix and call it tricho-epithelioma.

The tumor cells resemble those of the basal cell layer of the epidermis. 10 to 15% of the basal-cell epitheliomas contain prickle or squamous epithelial cells and such tumors form a special variety, the mixed cell type, the baso-squamous-cell epithelioma which is more resistant to irradiation therapy and runs the course of squamous-cell epithelioma.

Basal-cell epithelioma is usually classed as malignant although some varieties (turban tumors, adenoid cystic epithelioma, and cylindroma) are regarded as benign by some authors. It is a tumor of local or low grade malignancy, grade I, and spreads by direct peripheral extension; it may destroy the ala nasae, lip, eyelid, or ear, and may invade cartilage and bone. It does not metastasize to the regional lymph nodes.

Occasionally this tumor grows fairly rapidly, but it usually progresses slowly over a period of years (up to 2 years). It is frequently preceded by senile keratosis, and several years may elapse before induration appears. About 20% are multiple lesions, particularly in the older people.

The site of predilection is the face (the nose, cheeks, inner canthus, and forehead), and less frequently on the neck and trunk.

The four main clinical types are: nodular, papillary, deep, and flat. In the nodular type there may be a well defined induration, a nodule, or a group of nodules which are smooth,

firm, pink, and have fine blood vessels on the surface. A large nodule may present a depressed or ulcerated center and rolled edges.

The papillary basal-cell epithelioma may resemble the common wart; it may be pigmented, brown to black, and be clinically mistaken for malignant melanoma.

The deep variety forms a nodule in the derma, with little change in the epidermis. It is frequently of the mixed cell type, the baso-squamous-cell epithelioma.

The flat type is also called psoriasiform cancer or superficial epitheliomatosis. The lesions may be single, but are often multiple and scattered over the body, especially on the trunk, and they may be associated with other skin lesions, such as psoriasis. The lesions are usually pale red, slightly scaly, superficial, and without induration, but later may become deep and ulcerative. This type is characterized by an intra-epithelial growth of tumor cells replacing the normal cells of the epidermis, without downward invasion of the derma, possibly a cancerous metaplasia forming a cancer in situ.

The typical basal-cell epithelioma offers little difficulty in the clinical diagnosis. The flat type without induration usually calls for biopsy. The larger ulcerated lesions can be easily biopsied. The deep variety may have to be excised and examined microscopically to establish the diagnosis.

Today x-ray therapy is the treatment of choice, especially about the face where a good cosmetic result is desirable. On the trunk such tumors can be excised surgically, and successfully if sufficiently wide excision is employed; post-operative irradiation can be given if complete removal is doubtful.

Basal-cell epithelioma responds well to beta irradiation, and in recent years x-ray therapy has replaced the older methods such as caustics, freezing, etc. Low voltage x-rays are used, unfiltered or with 1 mm Al filter; the dosages vary from 2100 to 4500 r, administered in fractional doses on successive days, dependent on the size and the character of the lesion.

There should be no deaths from basal-cell epitheliomas.

#### REFERENCE

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# ARIZONA MEDICINE

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## Editorials

### Our First Anniversary

This issue marks the First Anniversary of Arizona Medicine. It was a venture to which considerable uncertainty was attached. Without a back-log of Scientific Articles to begin with, combined with the abbreviated and curtailed Medical Meetings that are being held during the war, there was grave doubt as to whether there was sufficient material to publish a Journal. But in spite of the fact that every physician is doing at least twice as much work as he should, or cares to do, the members of the society have been very co-operative, and generous of their time, in providing plenty of material. We wish also at this time to acknowledge the compliments, and words of encouragement, which we received from the editors of numerous other state publications, when our new Journal made its appearance on their exchange lists.

### Individual or Collective?

In another part of this issue, appears an abstract of a scholarly address delivered this past summer before one of our National Medical Societies by a member of the U. S. Department of Justice. It is entitled "Justice and the Future of Medicine." It might also be entitled "As Others See Us." If the thoughts of this learned man represent a cross section of the minds of the American Public, few will deny

that the Medical Profession is "on the spot." But if medicine is changing, much of the change must be attributed to the tremendous scientific progress that is constantly going on, as well as economic factors. The fact is universally known that Americans have the best system of medicine on the face of the earth. But the only man who comprehends and visualizes the secret of this great system is the physician in the private practice of Medicine. He alone understands the meaning of the physician-patient relationship. And this combined with the principle of competition explains the high type of service the profession is rendering.

But the regrettable thing is that this private practitioner is too busy, especially at this time, to give his attention and the wisdom he has gained to this 'new order' which we are told is inevitably on its way. The result is that too many minds, untrained medically are at work solving 'our future'.

A group of physicians is the most deliberative group of individuals that can be congregated. They have the reputation for disagreeing. For that reason they are easy prey for the politician. And we find many doctors accepting the propaganda put out by our enemies as facts.

Prior to the recent election the Maricopa County Medical Society refused to take a collective stand publicly against the proposed \$60 at \$60 amendment. In other words they refused to vie with a bunch of scheming, ham and egg politicians who came into the state and propagandized our old people into thinking that this was the best way for them to get a pension. They are the same scheming politicians and racketeers who are trying to sell the Wagner-Murray-Dingal Bill to the American people. Our old people didn't want the \$60 at 60 amendment. They only want a pension. And the American people do not want the Murray-Wagner-Dingall Bill. They only want the medical care which it offers them.

Our population can be divided into 3 groups (1) the upper class comprising about 6%-8% who are capable of meeting all Medical expense (2) the great middle class and low income groups, and (3) the indigent groups. The third group will always be dependent on both local authorities and the Federal Government. But it is this great middle class and low income

group that need help in meeting their medical expense. And it is the fervent hope this help will be found in the voluntary, pre-payment, non-profit hospital and medical services which are being organized and expanded throughout the nation. It is estimated now that about 25 million Americans are benefiting, at least in some way, by these services. But the objective of Organized Medicine is to increase these figures at least three-fold. It is not difficult for the private practitioner to visualize the doom of such legislation as the Wagner-Murray-Dingall Bill, but unless he succeeds in getting it across to the American Public, they are very liable to witness another noble experiment in the not distant future, or by the time we reach another economic depression.

### "Expert Testimony"

A recent murder trial in the city of Washington brought together a long array of medical expert testimony, and, as is usual in such cases, there was the pro and con element. From the newspaper reports of this trial, both parties to the shooting being professional men and the trial therefore attracting more than usual attention by the press, it was clear that this medical testimony was quite at variance. In the editorial columns of "Medical Annals of the District of Columbia", for July, 1944, appear comment on this subject that is worth repeating, since it succinctly points out the many evils pertaining to our present conception of what medical expert testimony should be. It is printed herewith:

"A recent criminal trial in the District Court has called attention again to a perennial problem, that of expert medical testimony.

"In a criminal case the emotions of the public may run high, sides are taken, and there is a demand for vengeance by some, while others urge acquittal. In short, the trial, instead of a forum for the search for truth, becomes an arena in which the prosecutor and defense do battle, and anyone who appears as a witness is looked upon as a partisan, whatever his intentions or motives.

"The lot of the medical man, particularly if he be called upon to give an opin-

ion concerning the defendant's 'sanity', a medically-unrealistic concept, defined by wholly unpsychological standards laid down by legal philosophers a hundred years ago, is not a happy one. Even if he has made an examination of the defendant (and the jail or courtroom is hardly comparable with the hospital or office), he is subjected to various hypothetical questions, which, like as not, merely befuddle the jury. Further, the fact that he is produced by one side or the other makes his testimony suspected as presumably biased. It is, of course, axiomatic that a lawyer will not knowingly call an expert whose opinion is greatly at variance with the former's theory of the case.

"The Commissioners on Uniform State Laws proposed a bill about 1937, which, although a substantial advance, has not yet been adopted in toto in any jurisdiction. If the law lags in expecting progress, however, the medical profession at least have it in their power to bring about improvement by voluntary action. Consideration might well be given to a policy under which no psychiatrist would agree to act as expert unless it were stipulated that his examination should be made jointly with the other experts employed by both parties, and that a joint report should be submitted. In this manner the testimony would deal with the same facts and much would be accomplished toward eliminating the appearance (perhaps the fact) of bias. The expert, at least, should do his part, despite any examples which may be set him, in seeking to learn and present the truth as clearly and impartially as human emotional attitudes will permit."

—Reprinted from the JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. October, 1944.

### Distribution of Tuberculosis Death Rate

Some of the major battles of the national tuberculosis control program recently authorized by Congress will be waged in the ninety-two cities of 100,000 or more population, where about one out of every three tuberculosis deaths occurs, and where the average tuberculosis death rates are about one third higher than in smaller towns and rural areas, Dr. Herman

E. Hilleboe, chief of the Tuberculosis Control Division, the U. S. Public Health Service, Federal Security Agency, said on August 3.

The Public Health Service has published tabulations, based on data from the U. S. Bureau of Census for the three year period 1939-1941, centering around the census of 1940, Dr. Hilleboe said, which show extreme variations in the death rate for tuberculosis in large cities from as low as 15.6 per 100,000 among white persons in Grand Rapids, Mich., to as high as 275.5 per 100,000 persons among non-whites in Newark, N. J.

"Studies are being made to discover what favorable conditions are responsible for the low tuberculosis death rates in some of our large cities," said Dr. Hilleboe, "and several of the cities with high mortality rates already have undertaken vigorous tuberculosis control programs to find and remedy the causes for their large tuberculosis death rates."

The average yearly tuberculosis death rate in the ninety-two large cities was 55.4 per 100,000 population compared with rates of 43.5 in places of 2,500 to 100,000 population, and 41.1 in rural areas.

These tabulations show only the "crude" rates for both sexes and all ages, Dr. Hilleboe pointed out.

Other studies, as yet unpublished, show that although tuberculosis death rates for males are higher in cities than in rural areas, the rates among females in rural areas are higher than in cities, except for very young girls. These facts mean that special problems, which must be solved in the national tuberculosis control program, exist in smaller cities and rural areas, as well as in large cities, said Dr. Hilleboe.

Fourteen of the ninety-two cities had tuberculosis death rates of less than 30 per 100,000 among all races. These cities, and their rates for all races were:

Grand Rapids, Mich., 15.6; Salt Lake City, Utah, 19.3; Minneapolis, Minn., 20.9; Des Moines, Iowa, 22.7; Spokane, Washington, 23.8; Akron, Ohio, 25.1; Duluth, Minn., 25.1; Flint, Michigan, 25.5; Wichita, Kansas, 26.4; Long Beach, California, 26.6; St. Paul, Minn., 26.8; Peoria, Illinois, 27.0; Springfield, Mass., 27.2; Sommerville, Mass., 27.7.

Twelve cities had tuberculosis death rates of more than 74 per 100,000 among all races.

Nashville, Tennessee, 79.3; Norfolk, Virginia, 80.6; New Orleans, Louisiana, 81.0; Baltimore, Maryland, 82.1; Washington, D. C., 82.7; Atlanta, Georgia, 86.5; Memphis, Tennessee, 89.1; Jacksonville, Florida, 89.4; Sacramento, California, 97.5; Chattanooga, Tennessee, 113.7; San Antonio, Texas, 151.7.

Rates for all races were highest in the South Central cities and lowest in the Mountain cities. Rates for whites were lowest in the North Central and the New England and Atlantic states, and were highest in the South Central and Pacific. Conditions were almost exactly opposite for non-whites, for whom rates were lowest in the South Central and the Pacific states and highest in the North Central and the New England and Atlantic.

—Reprinted from NEW YORK STATE JOURNAL OF MEDICINE, October 1, 1944.

### Rh Typing Serum

Rh typing serum is now available for all who need it.

This should be welcome news to the obstetrician and to the physician or surgeon administering transfusions, who appreciate the importance of this new blood type and have been concerned because of the lack of diagnostic serum. . . Except for the importance of obstetric complications, the sequelae resulting from the repeated transfusions of Rh— recipients with Rh+ blood are obviously of greater concern to physicians in the armed forces than to those in civilian practice. For the former often uses multiple transfusions in the treatment of hemorrhage, shock, blast or burn injury, or chronic infection, and the one man in seven who is RH— deserves the protection that is offered by this special typing of blood.

The early and, until recently, the chief handicap to differentiation in Rh— and Rh+ red cells was the scarcity of potent, rapidly active serum. The supply of such material was dependent on the identification of high-titered and anti-Rh agglutinins in the blood of the rare woman who built up these antibodies during and maintained them after the birth of one or more infants with erythroblastosis fetalis. Statistically, such an event occurs about once in more than 5,000 deliveries. Even if such women were willing and able to donate a pint of blood frequently, the supply of anti-Rh serum from this source alone would fall far short of meet-

ing the usual demand of civilian hospitals and the expanded needs of military establishments. It was therefore necessary to develop a method whereby larger amounts of Rh typing serum are available for immediate use. . . After the war it seems likely that Rh typing will assume even greater significance than it has at present. Certainly whole blood and resuspended red cells will be readily available and will probably be used freely. The Rh— men returning to civilian life who received one or more transfusions of whole blood during the war may have developed an appreciable titer of Rh agglutinins if Rh— blood was used, and on having another transfusion severe hemolytic reactions may occur following the injection of Rh+ red cells. Furthermore, the current civilian needs for Rh typing will not diminish. For these reasons, proper Rh typing serum will be required in abundance. The present project offers promise of meeting the need.

—Editorial in NEW ENGLAND JOURNAL OF MEDICINE, June 29, 1944 and taken from NEW YORK STATE JOURNAL OF MEDICINE, September 15, 1944.

#### NEWS FROM THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS, INC.

The 1944 epidemic of infantile paralysis has officially become the second worst in the recorded history of the disease in the United States, it was announced today by Basil O'Connor, president of The National Foundation for Infantile Paralysis.

At the same time, Mr. O'Connor stressed the need for more skilled polio fighters, especially physical therapists, and urged that men and women who have the proper qualifications make applications for scholarships offered by the National Foundation and its Chapters.

In the first 41 weeks of 1944, or up until October 14, there were 16,133 cases of poliomyelitis, according to the latest report from the U. S. Public Health Service. This is 353 cases more than were reported in the country for 1931 which previously had been the second worst year for the disease. The all-time record was in 1916 when there were 27,621 cases.

"Although the peak of the outbreak was passed more than a month ago, the epidemic itself has not yet ended," warned Mr. O'Connor. He pointed out that there were 710 new

cases reported for the week of October 7-14, or nearly half the weekly total at the peak of epidemic, the week ending September 2 and when 1,683 cases were reported.

"This great outbreak has tested not only the resources of the National Foundation and its Chapters, but also those of the nation," he added. "The Foundation's greatest problems were in obtaining sufficient doctors, physical therapists and professional personnel to cope with nearly simultaneous outbreaks in widely separated sections of the south, the east and the middle west. Seven skilled polio doctors, 65 physical therapists and nearly 10 tons of wool for use in hot pack treatments were rushed to stricken areas by the National Foundation. All 26 respirators owned by the National Foundation are still in use in epidemic areas. At the request of the National Foundation, the American Red Cross recruited more than 700 nurses from all parts of the country to staff regular and emergency hospitals."

The seven states most severely menaced were New York, North Carolina, Pennsylvania, New Jersey, Virginia, Ohio and Kentucky, but emergency aid in the form of money, professional personnel and supplies has been sent this year by the National Foundation to 21 states and the District of Columbia.

"Although the National Foundation and its Chapters have trained many physical therapists in the modern principles of treating infantile paralysis, many more technicians are still needed for this present fight," said Mr. Connor. "The greatest handicap in rendering effective aid in any epidemic of infantile paralysis has been the lack of physical therapists. The National Foundation for Infantile Paralysis through its scholarships in accredited schools of physical therapy has been and still is seeking to enlarge this first line of defense.

"These scholarships sponsored by the National Foundation are available to graduate nurses, graduates in physical education or those with a minimum of two years undergraduate college work with science courses. Such applications may be made through the National Foundation or to The American Physiotherapy Association, 1790 Broadway, New York 19, N. Y.

"The field of physical medicine is expanding rapidly and this is an opportunity for men

and women to enter an interesting, lucrative profession with a chance for performing a humane service."

#### THE AMERICAN REVIEW OF SOVIET MEDICINE

The full story of how surgeons in the USSR are reconstructing male genital organs injured or destroyed in the war has been revealed here for the first time by the Soviet doctor who did the pioneer work in this surgical field.

The doctor is A. P. Frumkin, professor of surgery at the Urologic Division of the Botkin Hospital in Moscow. Writing in the latest issue of *The American Review of Soviet Medicine*, bi-monthly publication of the American-Soviet Medical Society, Frumkin declares that "a complete loss of the external genitalia is a rather frequent occurrence in the present war," and that "this type of injury is extremely serious, since it precipitates the patient into a state of severe depression."

The Soviet physician then describes the stages in which the operation is performed to reconstruct the external genitals, beginning with the formation of an abdominal skin tube into which rib cartilage is inserted. Through these stages, Frumkin declares, "an organ is reconstructed which not only corrects the cosmetic defect but assumes the normal sexual function as well."

This issue of the magazine marks the beginning of its second year of publication. Associate editors who have just been added to the staff are Dr. Gregory Zilboorg, well known psychiatrist, and Dr. Jacob Heiman, Clinician. Dr. Henry E. Sigerist, editor of the journal and director of the Institute of the History of Medicine at Johns Hopkins University, is currently in India, at the official request of the British and Indian governments, where he is making a study of health conditions. Dr. Sigerist is considered the foremost authority on public health in this country. He is expected to return next month.

The current issue of *The American Review of Soviet Medicine* also features a short review of the Rehabilitation Clinic established in the Neurologic Division of the All-Union Institute of Experimental Medicine in Moscow. The author, A. R. Luria, a professor at the clinic, writes that "experience with physical therapy

in war time has changed many old concepts still prevalent."

Damage to the brain, Luria points out, "does not necessarily lead to a hopeless functional defect." He adds that physical therapy in many cases can "overcome defects arising from war trauma and permit the patient to regain in some degree his lost working capacity formerly considered impossible."

Soviet experiments in transplantation of tissues from persons who died of non-infectious diseases, to the war wounded, have already received attention in this country. Vladimir P. Filatov, noted Soviet scientist, describes in the journal how the Russians obtain and prepare tissue from human cadavers, and how they are preparing the way toward the use of eye banks and tissue banks as widespread as blood banks.

#### AMERICAN COLLEGE OF SURGEONS ANNOUNCE 1944 APPROVED LIST OF HOSPITALS

The American College of Surgeons announces that 3,152 hospitals in the United States and Canada are included in the 1944 Approved List. The list is published in the annual Approval Number fo the College Bulletin issued December 31.

A total of 3,911 hospitals were included in the 1944 survey and the approved hospitals represent 80.6 per cent. The first annual survey in 1918 included 692 hospitals of 100 beds or over of which only 89 or 12.8 per cent merited approval. Hospitals of 25 beds and over are covered in the current surveys.

A total of 2,342 hospitals of 100 beds and over were on the 1944 survey list, and 2,182 or 93.1 per cent were approved. A total of 1,119 hospitals of 50 to 99 bed capacity were under survey of which 789 or 70.3 per cent were approved. A total of 450 hospitals of 25 to 49 bed capacity were under survey of which 181 or 40.2 per cent were approved.

On December 31 of each year the ratings of hospitals under survey by the American College of Surgeons automatically terminate. The status of every hospital based upon all data collected from the current survey is reconsidered each year.

Following Arizona surgeons elected to fellowship in F.A.C.S. in 1944: Paul H. Case, Phoenix; Marcus G. Kelley, Miami.

## News Releases from Office of Surgeon General

### ARMY TREATMENT OF GONORRHEA AND SYPHILIS TOLD BY GENERAL MORGAN

In September 1944, the penicillin supply problem had eased to the point where the Army made penicillin the drug of choice in the treatment of gonorrhea and limited the use of the sulfonamides to cases which did not respond to adequate penicillin therapy or where penicillin was not available through normal supply channels.

Outlining the treatment to The Military Surgeons, Brigadier General Hugh J. Morgan, USA, Chief Consultant in Medicine to The Surgeon General, said that "the initial treatment schedule recommended is 20,000 units intramuscularly every three hours for a total dosage of 100,000 units. Patients in whom a favorable response is not obtained by the third day are re-treated with 100,000 units. When patients fail to respond to the second course, a third course of penicillin totaling not less than 300,000 units, administered in 20,000 unit doses every three hours is recommended. Should this fail, sulfathiazole or sulfadiazine is used, employing a dosage of 4 grams initially, followed by 1 gram every four hours day and night for five days."

"It is too early, of course," said General Morgan, "to evaluate the effect of this new policy regarding the treatment of gonorrhea. There is every reason to believe that we shall look upon it in retrospect as constituting one of the most conspicuous advances made during this war in military medicine, in light of its almost certain favorable effect upon morbidity and noneffectiveness, and this in spite of a rising incidence rate."

In October 1944, the penicillin treatment of syphilis was authorized throughout the Army. "The total dosage for early syphilis and latent syphilis," said General Morgan, "is 2,400,000 units given in sixty consecutive intramuscular injections of 40,000 units at three hour intervals day and night for seven and one-half days. No additional anti-syphilitic therapy is to be given during or after the completion of the course of penicillin, except in the case of penicillin treatment failures. Prior to October 11, 1944, this

method of treatment had been authorized for overseas theaters. Since that date it applies also to the zone of interior. Within the limits imposed by this short period of study, we have reason to believe that this method of treating syphilis will be every bit as effective and much less dangerous than any treatment plan heretofore employed."

### ARMY MALARIA CONTROL THREEFOLD PROBLEM SAYS GENERAL SIMMONS

The Army has made great progress in the control of its No. 1 disease hazard, malaria, according to Brigadier General James S. Simmons, USA, Chief of the Preventive Medicine Service, who described Army methods of malaria control to The Military Surgeons meeting in New York City this month. In the Army, the problem has two aspects, General Simmons said—control in base areas and protection of troops in combat. The first is primarily mosquito control, and specially trained personnel are required to produce effective results. The malaria control organization in the Army Medical Department includes medical officers trained in malariology, and small survey and control units headed by parasitologists, entomologists and sanitary engineers.

The second aspect—protection of troops in forward and combat areas—depends upon individual measures of protection in addition to mosquito control, according to General Simmons, and strict malaria discipline must be established and enforced. Soldiers must be drilled in the use of repellents, sleeping nets, protective clothing and insecticide sprays in the same way they are trained to use combat weapons.

Concerning the third aspect—the possible spread of malaria in this country by returning soldiers—General Simmons said that members of the armed forces who have had malaria will be given sufficient treatment to render them free from demonstrable parasites before they are discharged. In addition, men who have had malaria or served in malarial regions are advised to seek prompt medical attention and have a blood smear for malarial parasites in case of illness with fever.

However, he added, prevention of malaria in this country, as elsewhere, depends essen-

tially upon the control of the malaria carrying mosquito.

#### OFFICE OF SURGEON GENERAL OF US. S. ARMY

Tetanus has been virtually eliminated from our armed forces as a result of compulsory immunization. Major General Norman T. Kirk, U. S. A., Surgeon General of the Army says that not a single case has been reported among completely vaccinated troops and there has been only a handful of cases throughout the entire Army. These occurred prior to vaccination or before the immunization process had been completed. The Navy, which also requires tetanus immunization process, has had no cases of the disease among sailors or Marines wounded in combat up to September 15, 1944, according to the Navy Bureau of Medicine and Surgery.

The most recent account illustrating the value of tetanus immunization was given in the report of a Navy medical officer who served aboard a hospital ship on which 284 Japanese and 384 Americans, all wounded in the same engagement, were being treated. Fourteen cases of tetanus, ten of which were fatal, occurred among the Japanese. None of the Americans developed the disease. Army medical records indicate that the Japanese do not immunize actively against tetanus.

#### REDUCTION IN THE MEDICAL CORPS OF THE ARMY

A moderate reduction in numbers of Army Medical Corps officers is necessary in order to remain within presently allotted ceilings, the Office of The Surgeon General has announced. The need for Medical Corps Officers in senior grades who are assigned principally to administrative duties is less acute than formerly.

A Board of officers recently appointed in the Office of The Surgeon General is carefully considering the physical and other qualifications of all Medical Corps officers of the various components of the Army and their essentiality to the war effort.

As a result of this Board's study, it is anticipated that a number of separations of the above group will occur in the moderately near future. Regular Medical Corps officers will

be accorded retirement privileges under the provisions of Section II, Ar. 605-245, June 17, 1941, and Reserve, National Guard, and AUS Medical Corps officers will be given the opportunity of returning to the practice of medicine in a civilian status by relief from active duty or discharge.

#### STRENGTH OF THE ARMY MEDICAL DEPARTMENT

In connection with the recent announcement that the Army is no longer recruiting physicians, the following figures are of interest:

The Army Medical Department has grown from 8,010 at the beginning of World War I until it now numbers 680,891. Of this number approximately 44,651 are in the Medical Corps, 14,948 in the Dental Corps, 2,012 in the Veterinary Corps, 2,364 in the Sanitary Corps, 15,078 in the Medical Administrative Corps, 50 in the Pharmacy Corps, 40,305 in the Army Nurse Corps, and there are 559,327 enlisted men, 13 Physical Therapy Aides, and 1,334 Hospital Dietitians.

#### HEALTH OF ARMY IN U. S.

There has been a very slight seasonal increase from the low summer level in the incidence of colds, influenza and other common respiratory diseases among soldiers stationed in the United States. However, the current rates (October 13) are below those for any other year during the present war. The incidence of meningitis, measles, mumps and the other specific respiratory-transmitted diseases remains at or below the summer level.

#### INCIDENCE OF POLIOMYELITIS AMONG U. S. TROOPS

In the two-week period ending September 2, 1944, 20 cases of poliomyelitis were reported by Army installations in the United States. This represents a slightly higher incidence than for the corresponding period last year. The total incidence since the first of the year is somewhat lower than in the corresponding 8-month period of 1943. While most of the cases have occurred in the states which have a high civilian incidence of the disease they have been widely scattered.

#### TYPHUS VACCINE EXTENDED On the basis of information received from

the National Institute of Health, the Office of The Surgeon General is authorizing the extension of the expiration date on the Army's typhus vaccine from 12 months to 18 months.

## MEDICO - LEGAL MEDICINE IN THE SUPREME COURT OF THE STATE OF ARIZONA

UDALL, Superior Judge:

This case grows out of a claim for compensation filed by respondent, H. W. Green, against the employer and insurance carrier, named in the caption, and hereinafter referred to as the petitioners. The respondent, Industrial Commission of Arizona, on October 1, 1943, made a permanent total disability award to Green. A petition for re-hearing was allowed and the hearing held on December 22, 1943; thereafter, on January 7, 1944, the Commission rendered its decision on re-hearing affirming its original award. The petitioners being dissatisfied therewith have brought the matter before this Court for review, it being their principal contention that the findings and award are not supported by the evidence.

The respondent Green, hereinafter called the applicant, is a white male, who at the time of the injury was 59 years of age. He was a skilled carpenter and structural steel worker, which occupation he had followed for many years. During the two or three years immediately preceding the accident he had not lost any time from work by reason of any sickness or ailments causing disability and he worked steadily, except while going from one job to another, or when he wished to lay off. In the thirty days immediately preceding his injury he earned \$281.88; and in the year previous between \$2400.00 and \$2500.00.

The applicant went to work for Hedrick-Beck-Bate, contractors, one of the petitioners herein, at the Aluminum Plant, near Phoenix, on February 10, 1943. On March 20, while working as a carpenter on the second floor he stepped on a loose board which threw him off balance, and to prevent falling some fifteen feet he caught himself on the cross arm of a ladder and swung by one arm, twisting his body and injuring the lower part of his back and spine.

He was first examined and treated by Dr. Norman A. Ross who in his initial report to the Commission, dated March 30, described the injury as "right lumbo-sacral sprain and spasm right lumbar." The Doctor further stated that the X-ray diagnosis showed "no recent bony injury." The report made no reference to any other disabling condition not due to the accident, though that specific question was asked. He estimated that the applicant would be able to resume light work in three or four weeks.

Temporary total disability was awarded the applicant by the Commission on May 7, the justness of which is not questioned. The injured man was unable to return to work and on May 27, more than two months after the accident, he was examined by a Medical Board, composed of Doctors A. C. Kingsley, Willard Smith and A. M. Tuthill. Then for the first time "the usual sign and symptoms of Parkinson's disease" were noted in their report to the insurance carrier. In addition the report showed a definite old osteo-arthritis of the spine and pelvis which had been aggravated by the accident. They pronounced him totally incapacitated for any form of manual labor. None of the parties question the fact that the injured man has been unable to perform any work since the accident of March 20, 1943, nor is it contended that he will ever be able to again perform manual labor.

The Industrial Commission, after extended hearings, found that the applicant while employed in the State of Arizona by the above named defendant employer sustained an injury arising out of and in the course of his employment, (The details of the accident and resulting injury and wages earned were recited as we have heretofore set them forth.) and concluded:

"1. \* \* \* \* Prior to his injury, said applicants had a pre-existing arthritic condition of the back which was aggravated by the said injury; and Parkinson's disease which retards recovery."

"3. That said applicant is totally disabled and will continue to be totally disabled for the remainder of his life by reason of said injuries and the aggravation of pre-existing disease and pre-existing disease retarding recovery."

On the basis of these findings the Commission made an award for accident benefits and temporary total compensation amounting to \$1185.57, and the additional sum of \$183.22 monthly during the life of said applicant for total permanent disability.

The petitioners admit that the applicant was employed by them, that the accident referred to occurred, and that this employee sustained an injury, arising out of and in the course of his employment, to his back justifying the temporary total disability award. However they vigorously resist the final award which in effect requires them to pay for disability from a Parkinson's disease, which they claim all the medical evidence shows was not caused, nor aggravated, by the injury. Furthermore, they contend that the Commission in making the award based it upon the aggravation of a pre-existing arthritis condition of the back and that the evidence does not justify a finding of 100% disability on that score alone.

It might be well to first consider the nature

and symptoms of Parkinson's disease. This disease, known to the medical profession as paralysis agitans, and to the layman as shaky palsy, according to all of the medical testimony *in this case*, is a slow progressive disease involving the basal ganglia, mainly in the corpora striata, which might be termed as the central station. From this we have minor nuclei which have control in coordinating our muscular actions. The basal ganglia is in the lower part of the brain, just as the brain begins to form in the spinal cord. It is well protected by the skull and in the lower part by the cushion of the spinal fluid meninges. There are two types of the disease:

1. The type that frequently follows encephalitis, which may occur at any age.

2. The senile, arterial-sclerotic type, which the applicant was afflicted with, usually begins when a person is between 50 and 60 years of age and may extend from 5 to 15 years.

The cause of the disease, so Doctors Kingsley and Smith testified, is unknown to medical science, and it is incurable. One Doctor used this illustration, he said: "Parkinson's disease is like a light filament that burns out and swings and when it contacts there is a momentary light; that there you have ten thousand of these swinging and momentary contacts you get all sorts of combinations; that there are thousands of these swinging filaments in the nerve centers and that they hit and miss without rhyme or reason."

The symptoms are: In the beginning a slight pain in the back, usually affecting one side before the other. Following soreness and slight pain there will be a rigidity which may extend over the entire body; a rigidity and tremor; later there is characteristic facial expression with considerable salivation and difficulty in standing.

In this case the medical testimony is *remarkably free from conflict*; all of the Doctors who testified about the matter were in agreement, (a), that the applicant had been afflicted with Parkinson's disease for a "long time" prior to the injury, though he may not have been aware of it; (b) that the accident did not cause him to have Parkinson's disease; (c) that this disease was not aggravated in any way or manner by the injury; (d) that it was virtually impossible for this disease to be caused or aggravated by trauma; (e) that this disease was principally responsible for his present total permanent disability; (f) that there was no causal relationship between the Parkinson's disease and the injury.

While there might be some isolated sentence in the medical testimony that could be tortuously construed otherwise, we think this is the fair import of the testimony on this matter. We of course do not weigh the testimony, but only search the record to see whether the Com-

mission's findings are supported by any substantial evidence, even though there might be other contradicting evidence.

There is however ample testimony in the medical testimony that could be tortuously construed otherwise, we think this is the fair import of the testimony on this matter. We of course do not weigh the testimony, but only search the record to see whether the Commission's findings are supported by any substantial evidence, even though there might be other contradicting evidence.

There is however ample testimony in the record to show that the applicant prior to the injury had an arthritic back, and that the injury relied upon aggravated the pre-existing arthritis *which is undoubtedly the partial cause of his present total disability*. One of the Doctors referred to this condition as "crippling arthritis", but none of them testified that he was wholly permanently disabled from this arthritic condition. The referee refused to permit any examination by the petitioner seeking to establish percentages due to each cause, so that an apportionment might be made by the Commission. We discuss this ruling on evidence later.

The law with reference to pre-existing diseases is clearly stated by Dr. Schneider, he says:

"The courts, consistent with the theory of the Workmen's Compensation Acts, hold with practical uniformity that, where an employee afflicted with disease receives a personal injury under such circumstances as that he may have appealed to the act for relief on account of the injury had there been no disease involved, but the disease as it in fact exists is by the injury materially aggravated or accelerated, resulting in disability or death earlier than would have otherwise occurred, and the disability or death does not result from the disease alone, progressing naturally, as it would have done under ordinary conditions, but the injury aggravates and accelerates its progress, materially contributes to hasten its culmination in disability or death, there may be an award under the Compensation Acts."

1 Schneider on Workmen's Compensation, p. 312, Sec. 138.

Our decisions are entirely in accord with this view. Hartford Acc. Etc. Co. v. Hart 45 Ariz. 198, 41 Pac. (2d) 1089; Hunter v. Wm. Peper Construction Co. 46 Ariz. 465, 52 Pac. (2d) 472; Paramount Pictures, Etc., v. Industrial Com. 56 Ariz. 217, 106 Pac. (2d) 1024; Dauber v. City of Phoenix 59 Ariz. 489, 130 Pac. (2d) 56.

It is significant that the Commission, in this case, *did not base* its award upon the injury causing an aggravation of the Parkinson's disease. The award merely states that the latter

disease retarded recovery of the aggravated arthritic condition. If the only effect of a non-compensable disease is to retard recovery from a compensable injury and it does not in any manner tend to prevent ultimate recovery from such injury, then that retardation may be considered in awarding compensation for temporary disability, but it may not be considered in awarding for permanent disability. We are not here concerned with a temporary disability award. It would seem that if, at the time of the award, the Parkinson's disease was retarding recovery of the arthritic condition, then the applicant had not recovered. If he had not recovered therefrom then his condition had not become stationary or static and an award for permanent disability on that ground would be premature. *Ossio v. Verde Central Mines*, 45 Ariz. 176, 49 Pac. (2d) 396.

Respondents' counsel cite us to four cases where awards of Industrial Commissions in other states were upheld in granting compensation for an aggravation of Parkinson's disease, in these cases doctors testified that trauma may lead to or result in an aggravation of a latent Parkinson's disease. That this affliction is one which follows upon the heels of an injury, trauma, or infection, or emotion. *Hartford Accident & Indemnity Co. v. Industrial Com.* 64 Utah, 276, 228 Pac. 753; *Moffett v. Bozeman Canning Co.* 95 Mont. 347, 26 Pac. (2d) 973; *Barkhurst v. Department of Labor and Industries* 150 Wash. 551, 274 Pac. 105; *Natalini v. Riebler & Sons, Inc.* 286 Pac. 301, 133 Atl. 547. The medical testimony in those cases is so at variance with that found in this record that it adds proof to our statement made in the case of *Rice v. Tissaw*, 57 Ariz. 230, 112 Pac. (2d) 866, "that medicine is not an exact science."

It further appears that at least one recognized medical text, in speaking of the arteriosclerosis type of paralysis agitans, states:

"It was in these cases that emotional disturbances and injuries were supposed to have played a part."

(III, the Cyclopedias of Medicine, 634, published by F. A. Davis and Company)

and,

"Trauma may at times be the precipitating agent in the production of the syndrome."

(III, The Cyclopedias of Medicine, 635.)

*These highly persuasive cases can be of no avail to the applicant here for the simple reason that there is no medical testimony supporting such a claim.* *Knapp v. Arizona Highway Dep't*, 56 Ariz. 54, 140 Pac. (2d) 180; *Almanza v. Phelps Dodge Corp.* 57 Ariz. 150, 112 Pac. (2d) 215; *Cackos v. Stanley Fruit Co.* 55 Ariz. 72, 98 Pac. (2d) 471. And for the further reason that the award is not bottomed upon

an aggravation of the latent Parkinson's disease.

While it is true that the employer is not the insurer of the health of his employees, *Rose v. Goldberg Films* 50 Ariz. 349, 72 Pac. (2d) 452, yet he takes the employee subject to his condition when he enters the employment. *Dauber v. City of Phoenix*, supra; *In Re Madden* 222 Mass. 487, 111 N. E. 379.

The Supreme Court of Utah in the case of *Pinyon Queen Mining Co. v. Ind. Comm.* 59 Utah 402, 204 Pac. 323, well stated a principle that is equally applicable to our statutory law, we quote:

"The statute prescribes no standard of fitness to which the employee must conform, and compensation is not based on any implied warranty of perfect health or of immunity from latent and unknown tendencies to disease which may develop into positive ailments if incited to activity through any cause originating in the performance of the work for which he is hired."

An employer is not however responsible for disability, causing a loss of earning power, resulting from a pre-existing disease, unless the disease is proximately produced or aggravated by the injury complained of. *New River Coal Co. v. Files*, 315 Ala. 64, 109 So. 360. The law does not cover loss of earning power arising from some extreme cause. In other words, it is only those injuries which are proximately caused by the accident that are compensable. Proximate cause is defined as:

"The nearest independent cause which is adequate to and does produce the result, or in other words, the nearest in relation to cause and effect." 45 e. J. 908.

The burden of proof of all the material elements necessary to sustain an award under the Compensation Act is always upon the applicant. *Wiggins v. Pratt-Gilbert Hdw. Co.*, 48 Ariz. 375, 62 Pac. (2d) 124; *Dauber v. City of Phoenix*, supra; *Vest v. Phoenix Motor Co.* 50 Ariz. 137, 69 Pac. (2d) 795. We feel that in the instant case the applicant has failed to successfully carry this burden of proof. The record does not disclose any causal connection between the injury and the aggravation of the latent disease of paralysis agitans. Certainly from this record the Commission could not properly find that the injury of March 20, 1943, was the proximate cause of the Parkinson's disease, or any aggravation thereof.

Lastly, we consider the petitioners' assignment of error based upon the refusal of the referee who conducted the hearing to permit the medical experts to testify as to the percentage of permanent disability the applicant suffered by reason of the injury which aggravated the pre-existing arthritic condition.

The statutes of Arizona expressly authorize

the Commission to appoint an examiner or referee. Sections 56-905, 56-907, and 56-912, A. C. A., 1939. Johnson v. T. B. Stewart Const. Co. 37 Ariz. 250, 293 Pac. 20.

The petitioners complain of the failure of the Commission itself to hear the testimony and rule directly upon the admissibility of evidence. At the oral argument it developed that the Commission rarely, if ever, conducts a hearing, leaving it invariably to a referee to take the testimony and then they review the "cold record" and make findings upon which the award is based. Though they have the power to follow this procedure, we seriously doubt whether the legislature contemplated that this should be the rule rather than the exception. It would seem that the Commission, as the ultimate trier of the facts, is handicapping itself in these comparatively few contacted cases by not observing first hand the character of the witnesses, their appearance and deportment upon the stand and the many "intangible" things occurring in a hearing that perforce do not appear in the printed record.

It necessarily follows that if a referee is to conduct an orderly hearing that he has the power and the duty to rule upon the admissibility of evidence. However, if the effect of his ruling is to prevent the Commission from having before it when it makes its findings and award relevant and material evidence which was excluded from the record by the referee, the award must be set aside. This for the same reason that the judgment of a trial court would be reversed if it erroneously excluded evidence of that class from the consideration of the jury. Egelston v. Ind. Com. 52 Ariz. 276, 80 Pac. (2d) 689.

We are thus to consider whether the professed medical testimony which was excluded was material. From what we have previously stated and as the record now stands it is apparent that the referee did exclude relevant and material evidence that had a direct bearing and should have been considered by the Commission on the matter of apportioning the disability of the applicant, between the effect of aggravated arthritis and that of the non-aggravated Parkinson's disease. The referee and Commission were led into this mistake through their erroneous interpretation of the statutory law. They considered that sub. (d) of Sec. 56-957, A. C. A. 1939, reading in part:

"In determining the percentage of disability, consideration shall be given, among other things, to any previous disability, the occupation of the injured employee, the nature of the physical injury, and the age of the employee at the time of the injury. In case there is a previous disability, \* \* \* the percentage of disability for a subsequent injury shall be determined by computing the percentage of entire disability

and deducting therefrom the percentage of previous disability as it existed at the time of the subsequent injury"

as only applying to the "scheduled injuries" set forth under sub. (b), *supra*; whereas, we have held in two cases that the quoted subdivision also applies to the "other cases" or "odd lot cases" referred to under sub. (c) of the same section. Kilpatrick v. Hotel Adams Co. 42 Ariz. 128, 22 Pac. (2d) 836; Hoffman v. Brophy.....Ariz....., 149 Pac. (2d) 160. We stated in the case last cited, however, that "percentage of disability" means "the percentage of disability to earn his former wages", and the "percentage of functional physical disability" attributable to the injury in this case, which the petitioners were not permitted to develop and show, is only one of the factors to take into consideration in determining the applicant's impaired "ability to earn."

The Rhodes case, cited as Lee Contracting Co. v. Ind. Com.....Ariz....., 143 Pac. (2d) 888, was also erroneously interpreted by the referee and Commission. They construed this statement of the opinion:

"The best rule seems to be that when a disability is attributable to injury that is compensable it is not necessary to apportion the disability between the concurring causes"

as justification for ruling out the evidence proffered by the petitioners on the apportionment angle. A careful reading of this opinion, which we adhere to, shown that the applicant there

"sustained an injury to his back which aggravated, accentuated, accelerated, and exacerbated a pre-existing arthritic condition in his spine"

both were compensable causes arising out of the same injury, one being the direct effect of the accident and the other being the aggravation of the existing arthritic condition. The Oklahoma cases cited by us in support of this proposition will all show a similar situation. Under such circumstances it would be wholly unnecessary, even foolish, to apportion the percentage of disability arising from each separate cause.

The principle stated in the Rhodes case, *supra*, however has no application when, as here, one of the *two concurring causes* which produced the total disability was not attributable to the accident and injury for which compensation was to be granted, *but arose independently out of a disease which was not compensable under the record as it stands in this case*. Any other construction would violate the fundamental principle of the compensation law, *to-wit*; "That compensation is only to be granted when the disability or disease results proximately from the accident."

Inasmuch as the findings and award are not supported by the evidence, and the further fact that the referee excluded relevant and material evidence that should have been considered by the Commission, the award is set aside.

LEVI S. UDALL,  
Judge Superior Court.

Conecurring:

A. G. McALISTER,  
Chief Justice  
HENRY D. ROSS,  
Judge

NOTE: Due to the absence of Judge R. C. Stanford from the State, the Honorable Levi S. Udall, Judge of the Superior Court of Apache County, was called to sit in his stead.

**" . . . A NEW MEDICAL ORDER IS INEVITABLE . . . "**

Last June Wendel Berge, Assistant Attorney General of the United States and successor to Thurman Arnold as head of the Anti-trust Division, gave a scholarly address before the 14th Annual Meeting of the American Urological Association on "Justice and the Future of Medicine." The thesis of Mr. Berge's speech might be summed up in his statement that "In the advance of the arts of medicine, you have done a brilliant job. In the face of this advance it is all the more tragic that progress in the organization of medicine has lagged—and, because of this lag, the Nation has not had the full benefit of your superlative performance."

He then proceeds to explain what he means by "organization": ". . . as a group, physicians have been little exposed to the discipline of the social sciences, and social organization is as intricate and as full of mysteries as the art of medicine itself. So when I hear a physician speaking about the organization of medicine in a tone of doctrinaire finality, I cannot fail to remark the contrast with the courageous and humble search for truth displayed in his own work."

Of course Mr. Berge refers to the Group Health case. He does not dwell upon it at any length and concludes his remarks with this statement: "With the victory of the Government in the Supreme Court the case is now closed. I advert to it only because it has current significance. It is, to borrow a term from your profession, a symptom of a pathological condition in the organization of medicine. The organization of medicine has not kept up with its technology. The fault is not individual, but institutional. The cleavage is not to be eradicated by invectives, by isolation from modern thought, by clinging stubbornly to that which was once good. It can be resolved only by an escape from folk lore, a probing diagnosis, a conquest of prejudices, a drive at the very heart of the malady."

In a brief survey of trends, he mentions the passing of the family doctor who, he says, has been

succeeded by the modern general practitioner. He points to the progress in medicine, particularly in the laboratory. He calls attention to social changes, especially in urban communities. "The standard of living", he says, "has moved to a place of primacy among our everyday concerns. It makes the costs of medical service an inescapable problem. The care of the sick can no longer be absorbed by the family; it becomes an item of expense in the budget. If it is a wage-earner who is ill, there is a double cost; absence from work means loss of earnings and bills are there to be paid. So medical service becomes a sheer economic necessity, for unless a man's capacity to work is maintained, he ceases to earn. . . .

"And within this urban, industrial, wage-earning society, men and women are becoming increasingly conscious of what they want. Our workers demand health as a condition of their livelihoods. They insist upon adequate medical service at a price they can afford to pay, and in their newly-won self respect they will refuse all charity."

Finally he says, ". . . a changing medicine has not yet been adapted to its new world. The high objectives of the profession endure, for they are eternal. But they must be freshly applied. . . .

"In the not so long ago the old-fashioned doctor could be depended upon to administer medicine for the community. He could see to it that needs were met, service was adequate, and costs were justly distributed. The physician of today is in no position to discharge this office. His practice comprehends, not the whole community, but a mere fraction of it. If he is a specialist, the fraction is highly selective. And the whole body of physicians, each operating by himself, has no collective instrument by which it can apportion the totality of service in accordance with general need. . . . The sliding scale survives as a legacy from a simpler society. . . .

". . . It isn't that on the whole physicians are paid too much; the statistics I have seen lead me to believe that remuneration is quite inadequate. It is rather that there is waste, a failure fully to use facilities, a lack in getting the most out of a trained personnel.

"The result is a national tragedy. . . ."

What are the solutions?

Here Mr. Berge says, "The demand is for a vaster, more comprehensive, more reliable medical service. If an instrument of the common health can be provided on terms the people can afford, the people will rejoice. If you do not help them to it, the people will seize upon whatever agencies are at hand as a help in need. For the universal demand that the common health be served can not much longer be stayed."

"A great many physicians are justly fearful that the quality of service be compromised. From the profession I have frequently heard the argument that, when the Government undertakes to look after people's health, the service rendered is in-

variably poor. With this insistence on quality I fully concur. Nor do I dispute the fact that the new venture may provide a service that fails to meet the standards of the profession. But I cannot follow the argument that a causal relation exists between Government auspices and poor medicine. The truth is that a new system brings medical care to hosts of people who before have had no access to it. For them there can be no falling off in quality; there has been no service to fall off in quality. But under a new system the provision of doctors and facilities almost always falls short of the new and enlarged demand. As a result, doctors with exacting notions discover much with which they can find fault.

"But let's be fair and place the blame where it belongs. The shortcomings are not necessarily due to the new system. They are probably due to the shortage of personnel and equipment with which to work. . . ."

It might be called to Mr. Berge's attention that when he speaks of a "demand" for a "more comprehensive, more reliable medical service" there has been no evidence of great enthusiasm on the part of the public for a different system than we now have. The basis for this statement is the experimenting with various types of voluntary sickness insurance plans. They learned early that they had a "selling job" to do and a difficult one. People just were not interested until they had been convinced of the need for protection against the costs of illness. So it can hardly be said that there is a demand. However, in the opinion of progressive physicians, and there are many such, there is genuine need for better distribution of medical care. Most doctors will agree with the argument that a new day in medicine is dawning.

Physicians will take issue with Mr. Berge on the ability of patients to choose their own doctors. "If we are downright honest," he says, "you and I know that the layman possesses neither the facts about the distinctive competence of particular physicians nor trustworthy norms to guide his judgment. In a matter of medicine, I am not foolish enough to trust my own choice—and a check with some of my lawyer colleagues indicates that they agree with me. I have over the years, through the devious ways by which a layman gets a little practical knowledge, discovered a physician or two whose judgment I have reason to trust. And with me it's their choice, not mine, which goes."

"How many patients have walked into your office whose ailments have been aggravated by an amateur's choice of a physician? . . ."

Mr. Berge is here on ground, with which he is apparently not too familiar. There is the undeniable danger of a patient getting into the hands of an incompetent physician. However, the danger is not as great as Mr. Berge implies. The facts are that the modern physician is, on the whole, very well trained. There are, of course, still many medical practitioners who graduated during a

period when standards of medical education were much lower than at present but even among them there is a progressiveness which usually assures satisfactory medical service.

Laymen often inquire, "Who is the best specialist (in a certain field) in the city?" The truth is that no one is competent to say, not even the physicians themselves. Doctors are severe judges of each other and are not infrequently biased in their judgment.

Professional training of itself is not the sole criterion of a physician's ability. In fact, scholastically brilliant products of our best medical schools have in some instances been poor doctors. Generally speaking, however, training should be an important factor in selecting a doctor. Of importance, too, is his personality. No matter how well trained the physician may be, if patients do not have confidence in him they will seek someone else. So if a layman takes the trouble to inquire into the education, post-graduate training and other qualifications of a physician, not neglecting to learn at first hand something about his personality, his chances of securing the services of a satisfactory medical practitioner are just about as good as if he takes the advice of medical friends.

It is certainly encouraging to have Mr. Berge say, "Your code of medical ethics has always elevated the relief of suffering above the pursuit of gain." Physicians who recall the statements made during the Group Health case will find this pleasant reading.

Mr. Berge sees no reason for being concerned about the form of organization under which the doctor labors, for he says, "You are right in insisting that high standards of medical care must not be compromised. But standards are a professional matter. Their chief dependence is upon adequacy of resources. They are not inherent in any type of organization. Your current way, as well as state medicine, has its insidious dangers. And, since comparative merits are at issue I am not content with any argument which points out vices in the one without looking at the faults of the other. . . ."

The medical profession will challenge the statement that the type of organization has no bearing on the professional side of medicine. For it has been demonstrated many times both here and abroad that conditions under which doctors work must be satisfactory if they are to do their best work.

Finally Mr. Berge speaks of the Wagner-Murray-Dingell bill. He says, "The course of events moves fast and to me a new medical order seems inevitable. My fear is not that we will not get it—an awakened public, sparked by our veterans, will see to that. My fear is that we will bring to its creation all the knowledge, wisdom, understanding we possess. A reference to the Wagner-Murray-Dingell bill will make my point. About its intent and objectives there can be for me no dispute. Its detail of provisions, however, may or

may not fall short of its purpose—I do not know. On way and means I am open to argument in behalf of something which is better. In respect to the necessity of distributing the cost of protection against ills I am wholly convinced, and I think the American people are adamant.

"The medical order our stalwarts defend has already ceased to exist. . . . If doctors oppose, or stand on the side-lines, the layman will create a medical order which may prove to be indifferent or even blind to the values doctors prize most. If the doctors assume a role in creation, they can see to it that no compromise is made with the standards of the profession."

A majority of the medical profession will not seriously disagree with Mr. Berge's conclusions. Times are changing and will change a great deal more and it is obvious that medicine alone will not remain unaffected. As was stated in the beginning, Mr. Berge's address was an able exposition

of his views on medicine and one which most doctors can read with profit. They will not approve of all he has to say, nevertheless they will find themselves in agreement with many of his views.

The address had its humorous moments. At one point Mr. Berge says, "The family doctor—with his bed-side manner, his nostroms, his ponderous vocabulary to conceal his perplexities, his downright devotion to duty and sacrifice of self—was once the very epitome of the art of healing." His reference to the family doctor's ponderous vocabulary is rather amusing because Mr. Berge's address could hardly be classed as light reading. In fact, the doctors who heard him must have been somewhat overcome by his command of language. For example, he comes up with this one, "A long course of cosmic, geologic, biologic events has made of him (Man) the permutation of things which anatomically he is." Later on he puts on the pressure, ". . . I have yet to discover a case



Navy medical officers honor one of their dead. Group of Navy medical officers of the Third Marine Division on Guam gathered at the grave of Lt. W. G. Parish, USN, medical officer killed by Japanese in the attack on the field hospital at dawn July 26th. Dr. Parish, who lived in Cleveland, Ohio, was shot in the stomach and died on board a ship after the hospital was evacuated. The cemetery here is known as Marine Cemetery No. 1, and has in it the bodies of the First Marine and Navy personnel killed on the landing at Asan Beach, Guam. The cemetery is in a rice paddy. The men gathered here were all members of the same medical unit.

Left to right they are: Lt. (SG) (MC) Perry C. Spencer, East Lansing, Mich.; Lt. (SG) (MC) Frank B. Webster, USN, of Bellfontain, O.; Pharmacist Thomas J. McGilligan, USN, of Los Angeles, Calif.; Lt. (SG) (MC) Marvin Topper, USN, of Chicago, Ill.; Lt. Cdr. Clarence C. Piepergerdes, USN, of Bisbee, Ariz.; Lt. (SG) (MC) Jessie Wimp, USN, of Kirksville, Mo.; Lt. Commander Daniel B. Landau, USN, Hannibal, Mo.; Lt. Cdr. (MC) R. C. Surridge, USN, Los Angeles, Calif.; and Lt. (jg) (MC) Gerald V. Levereault, USN, of Springfield, Mass.

Official P. S. Marine Corps Photo, by Sgt. Heiberger.

in which a bungling physician was allowed to get off with a plea of *caveat emptor*." It would have been rather interesting to take a poll of the physicians present to ascertain how many of them knew what Mr. Berge meant by "*caveat emptor*." How-

ever, it is not the intention to quibble over such trivialities, for as has already been indicated, the speech was unusually well done whether one fully agrees with it or not.

—Reprinted from THE MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, August, 1944.

## ORGANIZATION SECTION

DAN L. MAHONEY, M. D., President

### Directory

#### ARIZONA STATE MEDICAL ASSOCIATION

Organized 1898

422 HEARD BUILDING, PHOENIX, ARIZONA

##### OFFICERS AND COUNCIL

|                                 |          |
|---------------------------------|----------|
| Dan L. Mahoney, M. D. (1948)    | Tucson   |
| President                       |          |
| Charles P. Austin, M. D. (1949) | Morenci  |
| President-Elect                 |          |
| Walter Brazie, M. D. (1945)     | Kingman  |
| Vice-President                  |          |
| Frank J. Milloy, M. D. (1945)   | Phoenix  |
| Secretary                       |          |
| C. E. Yount, M. D. (1945)       | Prescott |
| Treasurer                       |          |
| P. W. Butler, M. D. (1945)      | Safford  |
| Speaker of the House            |          |
| Jesse D. Hamer, M. D. (1946)    | Phoenix  |
| Delegate to A.M.A.              |          |
| D. F. Harbridge, M. D. (1945)   | Phoenix  |
| Chairman, Medical Defense       |          |

##### District Councillors

|  |          |
|--|----------|
| Robert S. Flinn, M. D. (1947)                                  | Phoenix  |
| Central District (Gila, Maricopa, Pinal, Yuma)                 |          |
| George O. Bassett, M. D. (1946)                                | Prescott |
| Northern District (Apache, Coconino, Mohave, Navajo, Yavapai)  |          |
| J. Newton Stratton, M. D. (1945)                               | Safford  |
| Southern District (Cochise, Greenlee, Graham Pima, Santa Cruz) |          |

##### Councilors-at-Large

|                               |         |
|-------------------------------|---------|
| E. Payne Palmer, M. D. (1946) | Phoenix |
| Hal W. Rice, M. D. (1945)     | Bisbee  |
| O. E. Utsinger, M. D. (1947)  | Ray     |

\*Serving unexpired term of W. Paul Holbrook in Service.

##### COMMITTEES

###### Scientific

Cancer Control—A. L. Lindberg (1947), Tucson; E. Payne Palmer (1945), Phoenix; M. G. Wright (1945), Winslow, and J. N. Stratton (1946), Safford.

History and Obituaries—Hal W. Rice, Historian, Bisbee; Donald F. Hill, Tucson, Frank J. Milloy, Phoenix.

Industrial Health—John D. Hamer (1947), Tiger; Chas. B. Huestis (1946), Hayden; E. M. Hayden (1945), Tucson.

Maternal and Child Health—L. C. McVay (1947), Phoenix; Howard C. James (1945), Tucson; W. P. Sherrill (1946), Phoenix.

Orthopedics—Geo. L. Dixon (1947), Tucson; E. W. Adamson (1946), Douglas; James Lytton-Smith (1945), Phoenix.

Scientific Assembly—Charles P. Austin President-elect and Chairman (1948), Morenci; Carl H. Gans (1947), Bisbee; G. F. Manning (1946), Flagstaff; R. W. Rudolph, Host Society (1945), Tucson; Frank J. Milloy (1945), Phoenix.

Scientific Education and Postgraduate Activities—A. H. Dysert (1946), McNary; A. I. Podolsky (1947), Yuma; Florence B. Yount (1945), Prescott; Chas. S. Kibler (1945) Tucson.

Syphilis and Social Diseases—L. H. Howard (1947), Tucson; L. G. Jekel (1946), Phoenix; George O. Bassett, (1945), Prescott.

Tuberculosis Control—James H. Allen (1947), Prescott; Samuel H. Watson (1946), Tucson; E. W. Phillips (1945), Phoenix.

###### Non-Scientific

Auxiliary Advisory—Geo. R. Barfoot (1947), Phoenix; W. Claude Davis (1946), Tucson; Florence B. Yount (1945), Prescott.

Editing and Publishing—Jesse D. Hamer (1945), Chairman, Phoenix; A. L. Lindberg (1946), Tucson; Walter Brazie (1947), Kingman.

Industrial Relations—Meade Clyne, Tucson; James Lytton-Smith, Phoenix; A. C. Carlson, Jerome; O. E. Utsinger, Ray; John W. Pennington, Phoenix; Frank J. Milloy, Secretary to Committee.

Medical Defense—D. F. Harbridge, Chairman (1945), Phoenix; A. C. Carlson (1946), Jerome; John W. Pennington (1947), Phoenix.

Medical Economics—C. E. Patterson (1946), Tucson; Meade Clyne (1945), Tucson; Robert S. Flinn (1947), Phoenix.

Public Health Education—H. L. McMartin (1947), Phoenix; J. S. Gonzalez (1946), Nogales; Paul H. Case (1945), Phoenix; Geo. O. Bassett (1945), Prescott.

Public Policy and Legislation—Charles A. Thomas (1947), Tucson; Walter Brazie (1946), Kingman; Jesse D. Hamer (1945), Phoenix.

State Health Relations—Louis G. Jekel, (1947) Phoenix; E. Henry Running (1946), Phoenix; Donald F. Hill (1945), Tucson.

### PRESIDENT'S MESSAGE

*Council Meeting.* As President of the Association, matters were laid before me needing the attention of the Council, hence a meeting was held at Phoenix on January 7. I would like to explain again, for the information of members of the Association, that all work of the Association is done through the committees and not through the officers as such. Committee members serve for three years each on their respective groups and are being schooled to carry out their programs in full with the Council approving their activities. When I say "being schooled to carry out their programs", I mean that under the new Constitution and By-Laws—and with war intervening to require continuous revision of committees—it has taken time to get going each year.

*Matters Before the Council.* This being a legislative year, it is natural to anticipate that there will be legislation of interest and concern to the health of the people of the state. The Committee on Legislation—Drs. Jesse D. Hamer, Charles A. Thomas and Walter Brazie, of Phoenix, Tucson and Kingman respectively,—were present and laid their program before the Council. The Council voted the committee full authority to proceed with any and all mat-

# Scientific Program

## ANNUAL MEETING

### April 27-28, 1945, Tucson, Arizona

PIONEER HOTEL — HEADQUARTERS

#### ROSTER OF SPEAKERS

(Baylor University College of Medicine)

|                          |   |
|--------------------------|---|
| George W. Salmon, M. D.  | Assistant Professor Pediatrics                            |
| Wilton M. Fisher, M. D.  | Assistant Professor Public Health                         |
| Paul A. Wheeler, M. D.   | Assistant Professor Pathology                             |
| Herman W. Johnson, M. D. | Professor and Chairman of Department of Obstetrics        |
| James A. Greene, M. D.   | Professor and Chairman of Department of Internal Medicine |

#### Friday Evening, April 27

1. Physical Findings in Heart Disease.....James A. Greene, M. D.
2. Fever in Persons Returned from the Tropics.....Round Table Discussion  
Drs. Fisher, Wheeler, Johnson, Salmon, and Greene

#### Saturday Morning, April 28

1. Tropical Diseases in this Area in the Post War Era  
Wilton M. Fisher, M. D.
2. An Evaluation of Arterial Changes in Gangrene of the Extremities.....Paul A. Wheeler, M. D.
3. Obstetrical.....Herman W. Johnson, M. D.

#### Saturday Afternoon, April 28

1. Pediatrics.....George W. Salmon, M. D.
2. Clinico-pathological Conference.....Visiting Staff

NOTE: ALVIS E. GREER, M. D., also of the faculty of Baylor University College of Medicine, has been added to the roster of speakers and will present a paper on some phase of FUNGUS DISEASE.

J. WINTHROP PEABODY, M. D., Professor of Diseases of the Respiratory System, Georgetown University School of Medicine, Washington, D. C., has accepted an invitation to address the Scientific Luncheon on some aspect of CHEST DISEASE.

ters arising before the legislature that should command the interest and attention of the medical profession in behalf of the public it serves. Each county will be called on immediately to name one contact man from its membership whom the association committee may reach for legislative purposes. *County Societies: Be on the Alert and Respond When You Receive Communications From This or Other Committees of the Association.*

**Public Health Education:** The Committee on Public Health Education—Drs. H. L. McMartin, Paul H. Case and Geo. O. Bassett, (Dr. J. S. Gonzalez of Nogales not being able to attend on short notice) — appeared before the Council to receive its approval for radio programs for the current season. The previous program, as approved by the Council, terminated on December 30. The former series of programs were well received by the public over the KOY Network—Phoenix, Tucson and Bisbee outlets. These were transcribed programs, the first series being entitled "*Before the Doctor Comes*", the second included 13 programs on "*Dodging Contagious Diseases*" while the third and concluding series was on "*Live and Like it.*" The Council authorized the Committee to continue educational programs over the radio and approved KTAR for the coming series. The first series to be presented is entitled "*American Medicine Serves the World at War,*" and consists of 10 interview type transcriptions that will be of especial interest to all families. *Watch For Your Notice As To the Date These Programs Will Begin.* Leaflets will be prepared for distribution among your patients informing them of the nature and time of these programs.

**Medical Economics.** Dr. R. S. Flinn, of the Committee on Medical Economics—the other two members not being able to attend (Drs. Meade Clyne and C. E. Patterson of Tucson) read a progress report from the Blue Cross Hospital Service of Arizona. In brief the report shows that the Blue Cross Hospital Service Plan is catching on in Arizona beyond expectations. Mr. L. Donald Lau, Executive Director, and Mr. M. Lee Astor, Field Representative for the Blue Cross Service, are enthusiastic and have accomplished much in getting the service

under way since July. Perhaps the most pertinent item in their progress report, from the standpoint of the medical profession, was the statement that several organizations are ready to subscribe to Blue Cross Hospital Service when they may subscribe to a surgical plan to accompany it. *The Council Authorized the Committee On Medical Economics to make a full survey and study of existing medical and surgical service plans and report their findings and present their recommendations at the Annual Meeting for the consideration of the Council and House of Delegates.* Pamphlets outlining the main provisions of present medical service plans are being ordered and the Committee will provide each member of the Association with this pamphlet, and other pertinent material. *Watch For Your Mailing: Then Give the Committee Your Opinions and Recommendations.*

**Your Council** consists of 14 members with the counties of *Cochise* (Bisbee), *Graham* (Safford), *Greenlee* (Morenci), *Maricopa* (Phoenix), *Mohave* (Kingman), *Pima* (Tucson), *Pinal* (Ray), and *Yavapai* (Prescott) the points from which members of the Council must come to attend these meetings. It is with pride that we say we had, as usual, a 100% attendance at this called meeting with one exception as one member of the Council had a conflicting meeting to attend during the same hours as he is a member of a State Board which was holding its quarterly meeting on this same date and during the same hours.

**Members At Large:** It is especially appreciated that members of the various county medical societies, when in Phoenix, either call in person at the Association office or phone and exchange items of interest relative to activities. We just hope this practice is continued and broadened as all committee heads and officers will be pleased to see and hear from any and all of you, either by letter or in person, any time you are nearby. It is such interest that stimulates growth. Thank you.

President.

## ANNUAL DUES

ANNUAL DUES FOR 1945 ARE NOW DUE AND PAYABLE TO:  
THE ARIZONA MEDICAL ASSOCIATION, 422 HEARD BUILDING, PHOENIX

THE AMOUNT OF STATE

ASSOCIATION DUES ..... \$30.00 per each active member; \$15.00  
(See: Note below) per each associate member.

EACH COUNTY MEDICAL SOCIETY....Collects the state association dues from  
each county member and remits same to  
the state association as per above.

MEMBERS IN SERVICE.....

Are carried on the state roster without  
payment of dues while in the service pro-  
vided they were members in good stand-  
ing at the time they entered service.

MEMBERSHIP WITH THE AMERI-  
CAN MEDICAL ASSOCIATION.....

An active member of the state associa-  
tion automatically becomes a member of  
the American Medical Association with-  
out remittance of dues to that organiza-  
tion.

FELLOWSHIP WITH THE AMERICAN  
MEDICAL ASSOCIATION: .....

A member of the American Medical As-  
sociation wishing to become a Fellow of  
the same organization, makes direct ap-  
plication to the American Medical As-  
sociation and upon acceptance by that  
organization and the payment of Fellow-  
ship dues, direct to the American Medi-  
cal Association, receives fellowship cre-  
dentials.

NOTE: An Active Member of the Arizona Medical Association is licensed in the state and engaged in private practice. An Associate Member is one not licensed to practice in the state and is engaged in some branch of the federal service—Indian Service, Veterans' Administration, researchist, teacher, or the like—and not engaged in pri-  
vate practice.

## ASSOCIATION RADIO PROGRAMS

### *Medical Quarter Hour*

The Council, at its meeting of January 7, appropriated funds to the *Committee on Public Health Education* for an entire year's series of radio programs.

#### **"American Medicine Serves the World at War"**

These programs are now under way and are to be heard—

**Each Monday at 6:15 p. m. • KTAR**

The present series opened on January 22, the series being entitled: "*American Medicine Serves the World at War*." These are transcribed interviews obtained from the Bureau of Health Education of the American Medical Association. The following are the programs on the dates they will be heard:

|  |                                      |
|--|--------------------------------------|
| January 22.....                            | "Treatment of War Casualties"        |
| Rear Admiral Harold W. Smith, M.C., USN    |                                      |
| January 29.....                            | "Surgical Advances in Wartime"       |
| Edw. J. McCormick, M.D., Toledo, Ohio      |                                      |
| February 5.....                            | "Health in Hawaii at War"            |
| Forrest J. Pinkerton, M.D., Honolulu       |                                      |
| February 12.....                           | "Public Health Problems in Wartime"  |
| Warren F. Draper, USPHS, Washington, D. C. |                                      |
| February 19.....                           | "Eye Aches and Eye Fakes"            |
| Harry S. Gradie, M.D., Chicago, Ill.       |                                      |
| February 26.....                           | "Cancer in Childhood"                |
| Frank L. Rector, M.D., Lansing, Mich.      |                                      |
| March 5.....                               | "Training Good Doctors"              |
| Victor Johnson, M.D., Chicago, Ill.        |                                      |
| March 12.....                              | "Protecting Patients and Physicians" |
| Austin E. Smith, M.D., Chicago, Ill.       |                                      |

The above series will be followed by one entitled: "*More Health For You*" which discusses, in interview with authorities, diseases of the middle age. During the summer months an important series on "*Keep Cool*" will be heard. Seasonal programs will then continue. Listen to these programs in your community. Call the attention of your patients to the same. Leaflets are under preparation for distribution, from your waiting room table, for your patients, but in the meantime tell them of these programs and invite them to listen and to give you their reaction to them.

**Let us hear from you.**

#### *Committee on Public Health Education*

H. L. McMartin, M.D., Chairman, Phoenix  
 Geo. O. Bassett, M.D., Member, Prescott  
 J. S. Gonzalez, M.D., Member, Nogales  
 Paul H. Case, M.D., Member Phoenix

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## Staff Meetings

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### ST. JOSEPH'S HOSPITAL REGULAR STAFF MEETING

November 13, 1944

1. *Myelography*—Presented by Dr. M. S. Dirks.
2. *External Ureteral Ectopia*—Presented by Dr. J. W. Pennington.
3. *Double Kidney with Double Ureters, One Opening to the Outside*—Presented by Dr. C. N. Ploussard.
4. *Case of Lupus Erythema Disseminata*—Presented by Dr. M. Cohen; Discussion by Dr. Robt. Flinn and Dr. Louis Jekel.

December 11, 1944

1. *Penicillin In Ear, Nose and Throat Infections, Sinusitis, etc*—Presented by Dr. W. H. Woern; Discussion by Dr. D. E. Brinkerhoff and Dr. A. E. Cruthirds.
2. *Election of Officers for the Staff of 1945*.

#### STAFF ELECTED FOR 1945

|                       |                        |
|-----------------------|------------------------|
| Chairman.....         | Dr. James Lytton-Smith |
| Vice-Chairman.....    | Dr. Norman A. Ross     |
| Secretary.....        | Dr. Robert H. Stevens  |
| Executive Committee.. | Dr. Louis G. Jekel     |
|                       | Dr. E. Henry Running   |
|                       | Dr. L. Clark McVay     |

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### MARICOPA COUNTY MEDICAL SOCIETY

Monday Evening, Nov. 6, 1944

#### *Scientific Program*

##### *"The Treatment of Syphilis"*

1. "The Modern Routine Treatment of Syphilis"—Dr. Louis G. Jekel.
2. "The Rapid Treatment Methods"—Dr. Paul Armour.
3. "The Treatment of Neurosyphilis"—Dr. Louis Saxe.

#### OFFICERS 1945

|                          |                           |
|--------------------------|---------------------------|
| President.....           | John W. Pennington, M. D. |
| Vice-President.....      | James Moore, M. D.        |
| Secretary-Treasurer..... | Lee Foster, M. D.         |
| Directors.....           | Louis Jekel, M. D.        |
|                          | Robert Stevens, M. D.     |
| Board of Censors....     | James Lytton-Smith, M. D. |
| Library Board.....       | Ben P. Frissell, M. D.    |
| Blood Bank Rep.....      | Howell Randolph, M. D.    |

|                 |                        |
|-----------------|------------------------|
| Delegates.....  | L. B. Baldwin, M. D.   |
|                 | R. Barfoot, M. D.      |
|                 | P. Case, M. D.         |
|                 | L. Foster, M. D.       |
|                 | B. Frissell, M. D.     |
|                 | J. Lytton-Smith, M. D. |
|                 | E. H. Running, M. D.   |
| Alternates..... | A. Cruthirds, M. D.    |
|                 | H. Franklin, M. D.     |
|                 | G. Irvine, M. D.       |
|                 | H. McKeown, M. D.      |
|                 | J. Moore, M. D.        |
|                 | J. M. Owens, M. D.     |
|                 | R. F. Palmer, M. D.    |

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### ST. MONICA'S HOSPITAL

1. Presentation of External Fixation of Fractures by means of the Roger Anderson apparatus—Dr. Matthew Cohen. Discussion by Dr. James Lytton-Smith.
2. Case Presentation of Bronchiectases with autopsy findings—Dr. Frederie Baier.

Officers of the Staff elected for 1945 are as follows:

|                        |                      |
|------------------------|----------------------|
| President.....         | Dr. Norman Ross      |
| Vice-President.....    | Dr. Trevor Browne    |
| Secretary.....         | Dr. Raymond Jennett  |
| Executive Council..... | Dr. Henry Running    |
|                        | Dr. Ben Pat Frissell |
|                        | Dr. J. H. Patterson  |

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### GOOD SAMARITAN HOSPITAL STAFF

October 23, 1944

1. Congenital Hare Lip—Dr. J. M. Owens.

November 27, 1944

2. So-Called Re-formed Gall Bladders—Dr. K. S. Harris; Discussion, Dr. H. J. McKeown, Dr. J. M. Owens.

Officers of the Staff elected for 1945 are as follows:

|                     |                      |
|---------------------|----------------------|
| President.....      | Dr. L. B. Baldwin    |
| Vice-President..... | Dr. W. H. Woern      |
| Secretary.....      | Dr. Ben Pat Frissell |

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### ST. MARY'S HOSPITAL, SANATORIUM

Tucson, Arizona

Officers of Staff elected for 1945:

|                         |                |
|-------------------------|----------------|
| President of Staff..... | Dr. J. A. Omer |
|-------------------------|----------------|

Vice-President.....Dr. H. S. Faris  
Secretary.....Dr. G. O. Hartman

The program of last staff meeting was conducted by Dr. C. A. Thomas, Chairman. Case reports were presented by the following:

Dr. V. M. Gore.....Sarcomatosis  
Dr. M. Clyne.....Lymphogranuloma  
Dr. R. W. Rudolph.....Splenomegaly

#### PIMA COUNTY MEDICAL SOCIETY

November 14, 1944

1. Symposium on the Problems of Asthma—Leaders: Dr. Claude Davis, Dr. C. S. Kibler, Dr. S. H. Watson, Dr. R. A. Wilson.

December 12, 1944

A symposium on arthritis will constitute the scientific program as follows:

1. Diagnosis—Illustrated with a movie, Dr. C. E. Bensema.
2. Treatment—Dr. Donald F. Hill.
3. Orthopedic Surgery in Arthritis — Dr. George L. Dixon.

## Woman's Auxiliary

### STATE AUXILIARY OFFICERS AND COMMITTEE CHAIRMEN

|                       |                                |
|-----------------------|--------------------------------|
| PRESIDENT             | Mrs. James H. Allen, Prescott  |
| PRESIDENT-ELECT       | Mrs. Paul H. Case, Phoenix     |
| FIRST VICE-PRESIDENT  | Mrs. W. Claude Davis, Tucson   |
| SECOND VICE-PRESIDENT | Mrs. James R. Moore, Phoenix   |
| RECORDING SECRETARY   | Mrs. C. E. Bensema, Tucson     |
| CORRESPONDING SEC'RY  | Mrs. Henry A. Hough, Prescott  |
| TREASURER             | Mrs. E. Henry Running, Phoenix |
| DIRECTORS:            | Tucson                         |
| Mrs. B. B. Edwards    | Phoenix                        |
| Mrs. Harian P. Mills  | Phoenix                        |
| Mrs. Edward M. Hayden | Tucson                         |
| Cancer Project        | Mrs. L. D. Beck, Phoenix       |
| Legislation           | Mrs. C. E. Patterson, Tucson   |
| Public Relations      | Mrs. George L. Dixon, Tucson   |
| Publicity             | Mrs. T. A. Hartgraves, Phoenix |
| Bulletin              | Mrs. L. Clark McWay, Phoenix   |
| Hygiene               | Mrs. Joy A. Omer, Tucson       |
| Historian             | Mrs. George B. Irvine, Tempe   |
| War Service           | Mrs. Jesse D. Hamer, Phoenix   |

(Mrs. T. A. Hartgraves, State Publicity Chairman)

### GREETINGS TO MEMBERS OF THE AUXILIARY

The year 1944 has closed with the accomplishment of many worth while activities. Among these, we would mention especially the work being done in the state by our members for "Cancer Control."

We are proud that the state commander for

### OCTOFOLLIN

has been the name employed to designate the brand of

### BENZESTROL

marketed by Schieffelin & Co.

Benzestrol has been recognized as the generic name for 2, 4-di(p-hydroxy-phenyl)-3-ethyl hexane by the Council on Pharmacy and Chemistry of the American Medical Association. It has been decided to discontinue the use of the name Octofollin and hereafter the product will be known and labelled SCHIEFFELIN BENZESTROL

### Schieffelin BENZESTROL

This fine synthetic estrogen is supplied in the same strengths and sizes as formerly, namely

#### BENZESTROL Tablets:

0.5, 1.0, 2.0, 5.0 mg. Bottles 50, 100 and 1,000.

#### BENZESTROL Solution:

5.0 mg. per cc, in 10cc rubber capped, multiple dose vials.

#### BENZESTROL Vaginal Tablets:

0.5 mg. bottles of 100.

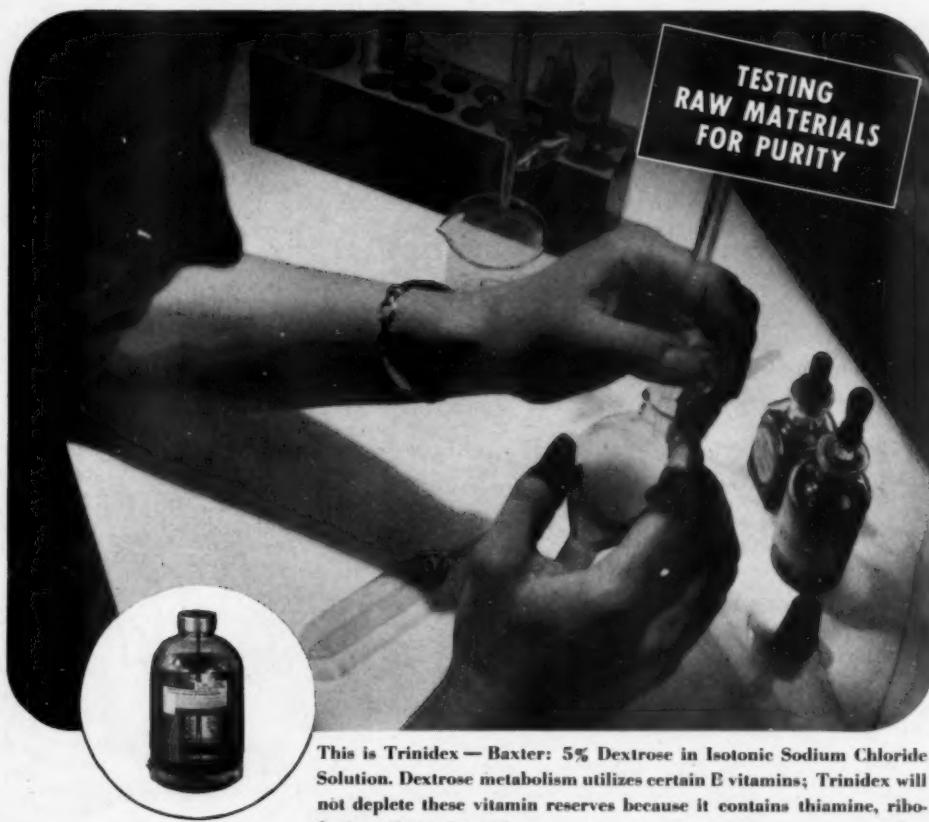
### Schieffelin & Co.

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| Great Falls Drug Co. . . . .            | Great Falls                   | Shaw Surgical Co. . . . .                 | Portland       |
| McKesson & Robbins . . . . .            | Billings                      | Southwestern Surgical Supply Co. . . . .  | Phoenix        |
| Missoula Drug Company . . . . .         | Missoula                      | Spokane Surgical Supply Company . . . . . | Spokane        |

this work is our own state publicity chairman, Mrs. T. A. Hartgraves of Phoenix. The April campaign for funds to carry on this work will be upon us soon. We hope that every Auxiliary member will back this campaign in every possible way.

One of the important reasons for our existence is the first object listed in our handbook. This is: "To interpret the aims of the medical profession to other organizations interested in the promotion of health education."

If we live up to this objective we must give our support to such health programs as Cancer Control, The Blue Cross program and others that may be brought to our attention by the Arizona State Medical Association.

An honor has come to us by the election of Mrs. Jesse D. Hamer as President-elect to our national organization. This office has been given only twice to any western state. To show our appreciation cannot we enlist every doctor's wife to become a member of our auxiliary?

There are many districts where it is not possible to have an auxiliary. In these sections, the wives of doctors may be members at large.

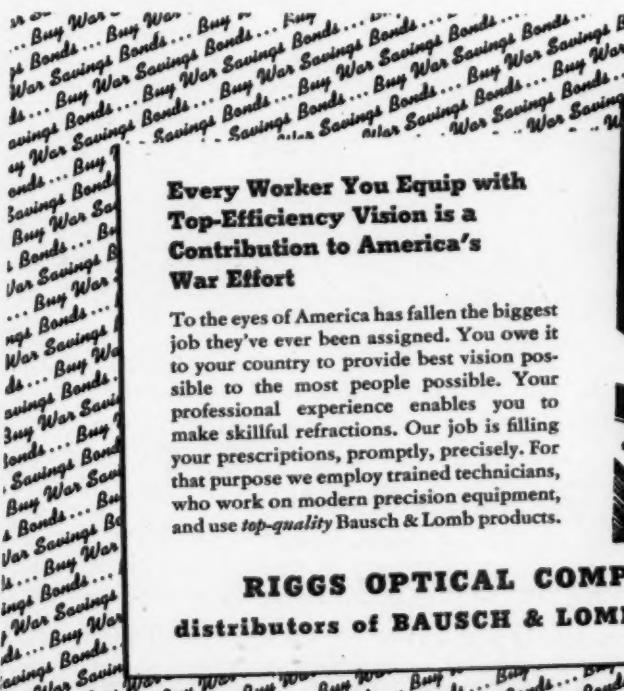
How fine it would be for our Mrs. Hamer, when assuming this national office, to be able to say, "Arizona is behind me one hundred per cent."

There is a possibility that we may have another auxiliary in our state soon. The women of Miami and vicinity are thinking of organizing. We sincerely hope this happens. It will be another report which our national president will be happy to make. We shall be delighted to welcome them.

Important among other objectives, spoken of at our convention in Phoenix, is the promotion of subscriptions to Hygeia and Bulletin. Let us help our state chairmen by taking care of these matters at once so that our reports may be completed before the closing of this year's work.

Our national president, Mrs. David W. Thomas, said in her inaugural address, "An army may be led by an exceptional general but with all his ability and knowledge of military tactics, he would lose every battle if the soldiers did not work in harmony with him."

So it is in our work. We as individuals may



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To the eyes of America has fallen the biggest job they've ever been assigned. You owe it to your country to provide best vision possible to the most people possible. Your professional experience enables you to make skillful refractions. Our job is filling your prescriptions, promptly, precisely. For that purpose we employ trained technicians, who work on modern precision equipment, and use top-quality Bausch & Lomb products.

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distributors of BAUSCH & LOMB products





Since the efficacy of orally administered CORAMINE\* (pyridine-beta-carboxylic acid diethylamide) in dyspnea of cardiac and pulmonary origin was first shown a decade ago, its clinical use has steadily expanded.

CORAMINE Liquid for oral use is available in bottles of 15 cc. ( $\frac{1}{2}$  fl. oz.), 45 cc. ( $1\frac{1}{2}$  fl. oz.) and 90 cc. (3 fl. oz.).

Dosage: 2-3 cc. from 3 to 8 times daily.

\*Trade Mark Reg. U. S. Pat. Off.

*a Ciba Product*

CIBA PHARMACEUTICAL PRODUCTS, INC., SUMMIT, NEW JERSEY  
IN CANADA—CIBA COMPANY LIMITED, MONTREAL



WHEN pernicious anemia has drained the patient's life potential and you see the dregs in his cup, you will turn with a certain inevitability to liver therapy.

With some of the same inevitability you will insist upon a thoroughly reliable solution of liver. For therein lies the effectiveness of your treatment.

Should you choose Purified Solution of Liver, Smith-Dorsey, your judgment will be confirmed. For Smith-Dorsey's product is manufactured under conditions which favor a high degree of dependability: the laboratories are capably staffed . . . equipped to the most modern specifications . . . geared to the production of a strictly standardized medicinal.

To know this is to know that, with the help of your treatment, life for your patient may once again regain much of its fulness . . . his cup once more be brimming.

### Purified Solution of *Liver* SMITH-DORSEY

Supplied in the following dosage forms: 1 cc. ampoules and 10 cc. and 30 cc. ampoule vials, each containing 10 U.S.P. Injectable Units per cc.

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accomplish little, but with the wife of every doctor working for the objectives of our auxiliary, we may go far toward winning the battle of health for Arizona.

I hope our reports for the year will show this interest and coordination that Mrs. Thomas has spoken of in her address.

Sincerely,

MARY ALLEN,  
State President of  
Auxiliary to Arizona  
Medical Association.

### PUBLICITY REPORT OF THE WOMAN'S AUXILIARY TO THE ARIZONA STATE MEDICAL ASSOCIATION

The Maricopa Auxiliary donated \$100.00 toward bringing an exhibit to Phoenix April 9th through 15th. This cancer exhibit is to be open to the public in a further effort to educate the public in cancer control.

A donation of \$75.00 was given to the Luke Field Nursery for the care of babies of the wives of servicemen.

The Pima County Auxiliary is presenting an educational program on cancer, on Tuesday, January 9th, at which time the picture "Choose to Live" will be shown and arrangements made for the surgical dressings program for indigent cancer patients.

The Yavapai County Auxiliary is distributing literature in the schools and generally helping to promote the cancer control campaign.

Respectfully, submitted,

MRS. THOMAS A. HARTGRAVES,  
Publicity Chairman.

### Book Reviews

"CLIMATE MAKES THE MAN", by Clarence A. Mills, M. D., Prof. Experimental Medicine, University of Cincinnati.

Reviewed by H. L. Franklin, M. D., before County Medical Society, October meeting.

Most of Prof. Mills' work has been in Medical Research with emphasis on effects of weather and climate, since 1917.

Fortunately science has accumulated a considerable mass of evidence regarding the surprising and powerful effect exerted upon human beings by climate and weather. These

## A CONSTANT STANDARD.

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| \$5,000.00 ACCIDENTAL DEATH                                  | For \$32.00 per year |
| \$25.00 weekly indemnity, accident and sickness              |                      |
| \$10,000.00 ACCIDENTAL DEATH                                 | For \$64.00 per year |
| \$50.00 weekly indemnity, accident and sickness              |                      |
| \$15,000.00 ACCIDENTAL DEATH                                 | For \$96.00 per year |
| \$75.00 weekly indemnity, accident and sickness              |                      |
| <b>ALSO HOSPITAL EXPENSE FOR MEMBERS, WIVES AND CHILDREN</b> |                      |

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\$12,000,000.00 PAID FOR CLAIMS**

\$200,000 deposited with State of Nebraska for protection of our members

Disability need not be incurred in line of duty—benefits from the beginning day of disability.

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findings help place man in the proper cosmic scheme, for the sun and planets exert an indirect but well-proven effect on all life—through their control of earth temperature and weather.

The speed of the burning of food in man's tissues and intensity of his living depend largely on outside temperatures and easiness of ridding himself of waste heat. These effect man's rate of growth, speed of development, and amount of energy available for thought or action.

Tropic heat produces passive complacency and saps man's vitality, his vegetative existence makes him more susceptible to infectious diseases. Colder climates drive him to restless activity, since natural conditions permit tissue fires to burn more brightly and his energetic life causes frequent breakdowns in body machinery; raising heart failure to leading position. White rats are particularly valuable in studies of climate because of their basic life function's resemblance to human beings. In fairly cool environment rats eliminated waste heat normally, ate greedily, grew rapidly, reaching maturity quickly. Their sexual cycles began early, reaching a high level of reproduction. When shifted to tropical heat, they ate less than  $\frac{1}{2}$  their normal amount, growth reduced, matured late and were of low fertility, although mating took place as freely. Conception and healthy offspring were difficult to achieve with a high rate of stillbirth. The same conditions are found in human population in tropical regions. However, these rats in hot climate lived longer than others, provided they were shielded from infections and contagious disease. People die early in tropics from infectious disease and people in cool climate live longest because they are more resistant to infection.

Farm animals in tropics do not mature as rapidly as animals further north due to low vitamin "B" content in grass and their meats show a similar deficiency. Tests show that in order to grow normally, rats living at the 90° F needed twice as much vitamin "B", especially Thiamin, as did cold group. The lack of vitamin "B" is probably common to inhabitants of all tropical countries.

The fallacy of early tropical maturity is proved by findings that show childhood growth

**Not only . . .****LABORATORY  
TESTS . . . which**

- showed edema of the rabbit conjunctiva averaging 2.7 from the smoke of ordinary cigarettes . . . compared with 0.8 from PHILIP MORRIS Cigarettes.

**But also . . .****CLINICAL  
TESTS . . . which**

- showed that when smokers changed to PHILIP MORRIS, substantially every case of irritation of the nose or throat due to smoking cleared completely or definitely improved . . .

**... conclusively prove****PHILIP MORRIS CIGARETTES****to be definitely and measurably****LESS IRRITATING**

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**TO THE PHYSICIAN WHO SMOKES A PIPE:** We suggest an unusually fine new blend—Country Doctor Pipe Mixture. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

# Effective Convenient Economical

THE effectiveness of Mercurochrome has been demonstrated by more than twenty years of extensive clinical use. For professional convenience Mercurochrome is supplied in four forms—Aqueous Solution in Applicator Bottles for the treatment of minor wounds, Surgical Solution for preoperative skin disinfection, Tablets and Powder from which solutions of any desired concentration may readily be prepared.

## Mercurochrome

(H. W. & D. brand of merbromin, dibromoxymercurifluorescein-sodium)

is economical because stock solutions may be dispensed quickly and at low cost. Stock solutions keep indefinitely.

Mercurochrome is antiseptic and relatively non-irritating and non-toxic in wounds.

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**HYNSON, WESTCOTT  
& DUNNING, INC.  
BALTIMORE, MARYLAND**

proceeds most rapidly and sexual functions develop earliest in people who live in coolness of middle-temperate latitudes. The average age occur five months earlier in temperate climates. Some readers may bring up point of high tropical birth rate as compared to rate in temperate zones; but, the high rate is not due to greater reproduction ability, but because of lack of inhibitions allow every trace of fertility to yield results. Temperate zone races could far out-breed those of tropics if they possessed same lack of restraint.

The price of activity as an unconscious response to climatic urge is the greatest health menace to our people. As in contrast to Tropics, where it is quite rare excepting advanced old age, heart failure is leading cause of death followed by other degenerative diseases.

Respiratory infections are attributed to frequent temperature changes and stormy weather; also, that the cancer rate may be influenced by it. Concerning climate and human reproduction, live-birth statistics show greatest number of conceptions occur during period of year when climate is relatively mild, and children conceived at this time are more vigorous physically and mentally.

In the last two or three thousand years there have been several cycles of relatively cool and warm weather.

For the past fifty or sixty years the mean temperature has been rising. Man's present stature has been influenced by these cycles. For the past few hundred years he has increased his length, but it shows, even now, some evidence of decline, in spite of more abundant food supply and vitamins.

### Prices Reduced On Priodax Tablets

Effective last September, prices on Priodax Tablets were reduced approximately 26 percent by the Schering Corporation, Bloomfield, N. J. manufacturers of this selective contrast medium for gall bladder visualization.

In announcing the price reduction, Arthur F. Peterson, Manager of the Domestic Sales Division of the Company, said, "The Medical profession has been quick to accept Priodax—it was introduced only a little more than a year ago—and Schering is just as quick to adjust its prices to reflect the lower manufacturing costs resulting from increased production.



The coil spring in the rim of the "RAMSES"® Diaphragm is flexible in all planes, permitting adjustment to muscular action.

The spring used has sufficient tension to insure close contact with the vaginal walls during use.

The spring is covered with soft rubber tubing which serves to protect the patient against undue spring pressure. Also provides a wide unindented area of contact.



Cut away section of "RAMSES"® Diaphragm Rim. Note cushion of rubber tubing which protects against spring pressure; provides smooth unindented area of contact with vaginal walls.

Side view of "RAMSES" Diaphragm Rim showing coil spring imbedded in tubing.



"RAMSES" Flexible Cushioned Diaphragms are supplied in sizes ranging from 50 to 95 millimeters. They are available through any recognized pharmacy. Only the "RAMSES" Diaphragm has the patented flexible cushioned rim.

\*The word "Ramses" is the registered trademark of Julius Schmid, Inc.

gynecological division

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ALLERGY

910 Professional Bldg. Phoenix

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**LUDWIG LINDBERG, M. D.**

CANCER AND ALLIED DISEASES  
THERAPEUTIC RADIOLGY

23 East Ochoa St. Tucson, Arizona

## Correspondence

32nd Troop Carrier Squadron  
314th Troop Carrier Group  
A. P. O. 133, New York, N. Y.  
October 7, 1944.  
Somewhere in England

Arizona Medicine,  
Phoenix, Arizona.

Gentlemen:

Please enter my name on your subscription list and send me the new journal at the above address. Previous to my entering the Service I was associated during 1941 and early 1942 with the Thomas-Davis Clinic in Tucson, then was engaged for the summer months in private and industrial practice at Parker and Poston (War Relocation Center).

I first became aware that there was a journal published in Arizona when I noted a table of contents in the Current Medical Literature section of the J. A. M. A. If possible could you send me the back copies so that I may have a complete file of this journal? Also send me the appropriate bill.

I think every Arizona man who has been stationed in this horrible English climate wishes he could get back to God's country and a decent amount of sunshine for a change. I am Flight Surgeon with one of the most disgustingly healthy bunch of pilots and flying personnel you've ever seen. This unit has received the Presidential citation for its work in the past and has distinguished itself in the major air-borne assaults of D-day and since. The only decoration that any of us really care to wear though will be the Victory ribbon which we hope will be awarded in the near future.

Meanwhile, I shall be very happy to be able to read in the new journal a little about what the chaps that are keeping the home fires burning are doing along medical lines.

Yours truly,

—DELBERT W. HESS,  
Captain, M. C. AUS.

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Few are the diseases in which maintenance of the nutritional state is less important than specific therapy. For unless the metabolic demands of the morbid organism are adequately satisfied, maximal response to drug administration hardly can be expected.

In a host of febrile, infectious, and neoplastic diseases Ovaltine can be of considerable benefit in supplying the extra nutrients required during periods of greater need. This nutritious

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Three daily servings of Ovaltine, each made of  $\frac{1}{2}$  oz. Ovaltine and 8 oz. of whole milk,\* provide:

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|------------------------|-----------|----------------------|-----------|
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| CALCIUM . . . . .      | 1.104 Gm. | RIBOFLAVIN . . . . . | 1.278 mg. |
| PHOSPHORUS . . . . .   | .903 Gm.  | NIACIN . . . . .     | 7.0 mg.   |
| IRON . . . . .         | 11.94 mg. | COPPER . . . . .     | .5 mg.    |

\*Based on average reported values for milk.



A child's second birthday does not confer a magical protection against rickets, as has well been demonstrated by a recent study<sup>1</sup> at Johns Hopkins Hospital in which almost fifty per cent of the children between the ages of 2 and 14, who died from various causes, were shown to have evidence of rickets.

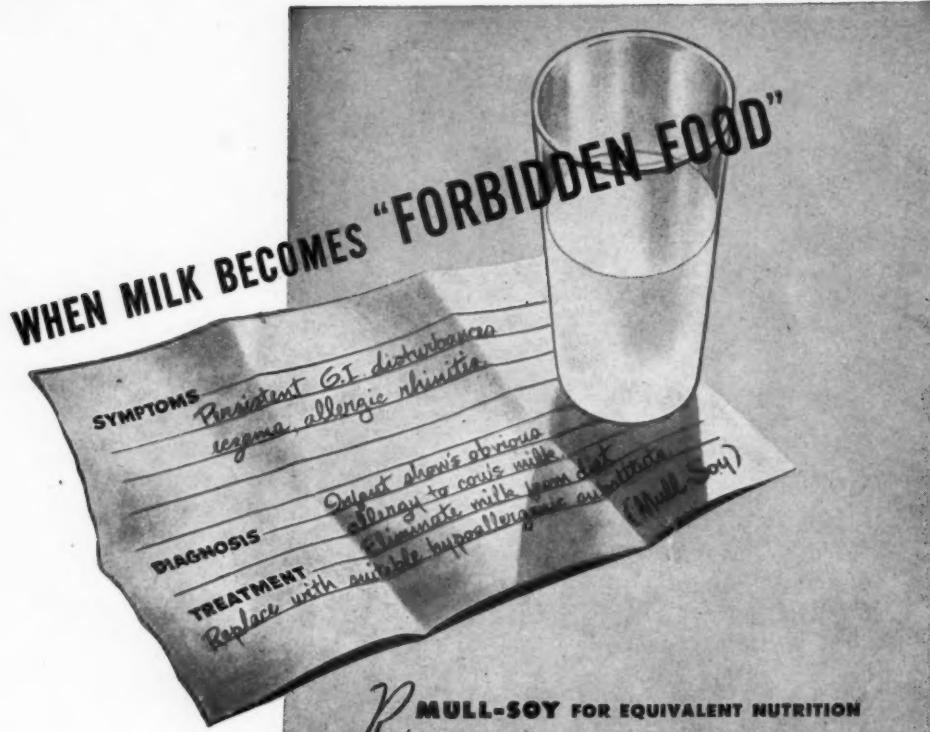
Protection "as long as growth persists" can be readily achieved with dependable, potent, Upjohn vitamin preparations, available in forms that meet the varying needs of infancy, childhood, and early adolescence.

1. Am. J. Dis. Child. 66:1 (July) 1943.



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|---------------------------|---------------|
| 1 Part Mull-Soy           | Average Whole |
| 1 Part Water              | Cow's Milk    |
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| 4.0% . . . Fat            | 3.8%          |
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| 1.0% . . . Total Minerals | 0.7%          |
| 87.2% . . . Water         | 87.3%         |

Each provides 20 calories per fluid ounce



## MULL-SOY

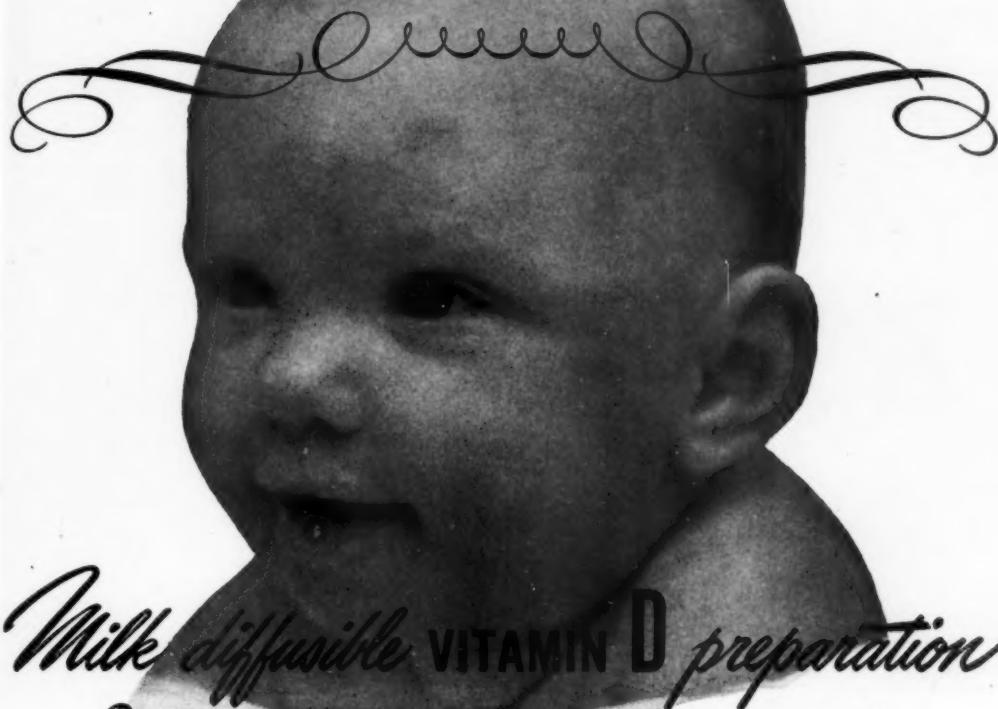
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[75]

For infants and for children



## Milk diffusible VITAMIN D preparation

DRISDOL in Propylene Glycol makes it possible to secure the benefits obtainable from combining vitamin D with the daily milk ration. This preparation is simple, convenient and easy to use, and relatively little is required for prophylaxis and treatment of rickets—only two drops daily.

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DOES NOT HAVE A FISHY TASTE • DOES NOT HAVE A FISHY ODOR

Drisdol in Propylene Glycol—10,000 units per Gram—is available in bottles containing 5 cc. and 50 cc. A special dropper delivering 250 U.S.P. vitamin D units per drop is supplied with each bottle.

# DRISDOL

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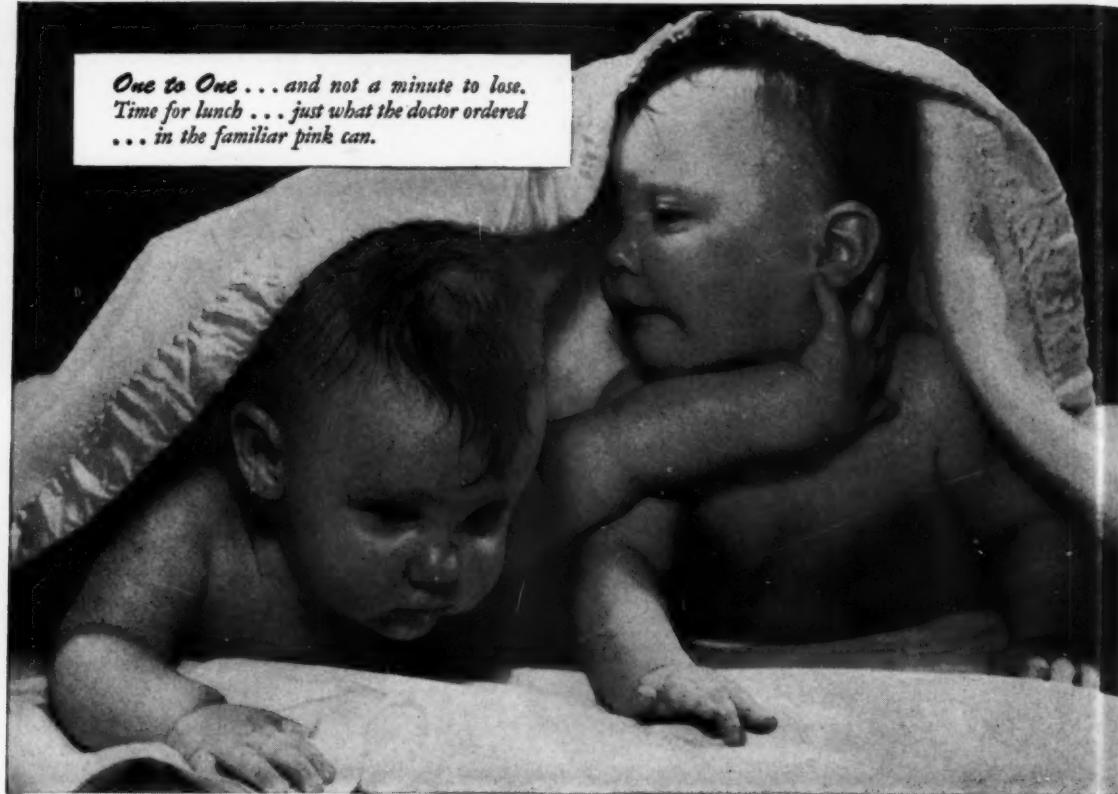


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Time for lunch . . . just what the doctor ordered  
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[77]

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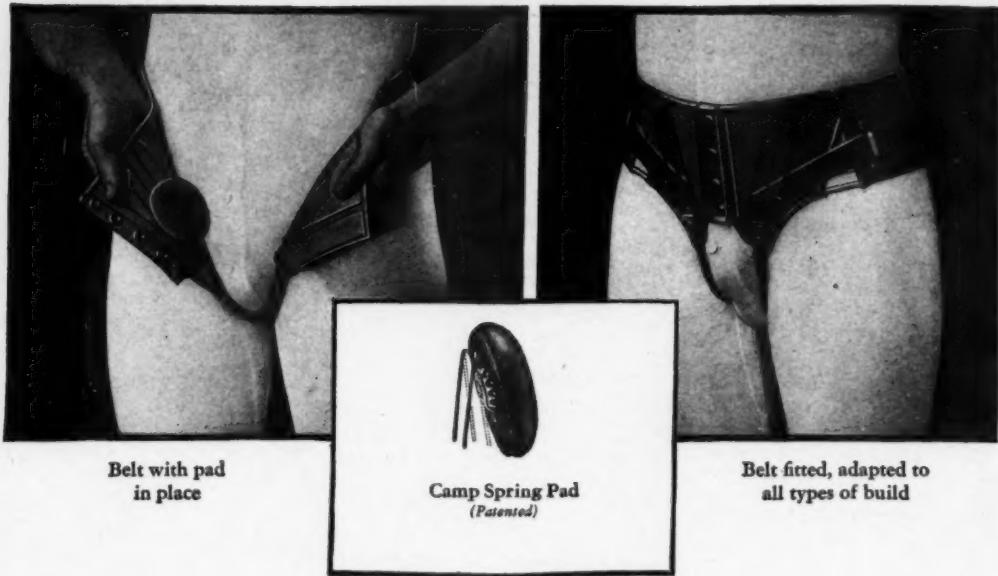
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White's PRESCRIPTION  vitamins



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Belt with pad  
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Camp Spring Pad  
(Patented)

Belt fitted, adapted to  
all types of build

**I**N patients with indirect inguinal hernia of small or moderate size, this belt with pad has proved successful in many instances in holding the hernia within the abdominal cavity. The comfort of a belt about the pelvic girdle is greatly appreciated by the patient.

The CAMP adjustable spring pad for use with the belt is equipped with prongs of piano wire. The strong flexible prongs fit firmly in the casings of the belt. Pads are available in varying shapes and depths.

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Surgeons who wish some protection over the area after operation will find this belt of particular advantage because the adjustment allows varying degrees of firmness about the lower abdomen.

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Penicillin-C.S.C. appears as a thin friable wafer in the bottom of the vial.

#### **How is it Packaged?**

Penicillin-C.S.C. is supplied in serum-type, rubber-stoppered, aluminum-sealed vials, containing 100,000 Oxford Units each. C.S.C. originated this mode of packaging for penicillin.

#### **What are its Properties?**

Penicillin-C.S.C. is tested and assayed, chemically and biologically, to be of stated potency . . . sterile . . . nontoxic . . . free from fever-inducing pyrogens.

#### **What is its Stability?**

Penicillin-C.S.C. now carries an expiration date of 12 months from its date of manufacture. When stored in the refrigerator as directed, it retains its potency and remains sterile, nontoxic, pyrogen-free.

#### **What is its Solubility?**

Penicillin-C.S.C. dissolves promptly when physiologic salt solution or distilled water is injected into the vial. Little or no shaking is required to secure uniformity of solution.

1. A battery of the giant tanks in which Penicillin-C.S.C. is produced by "submerged culture."

2. Vial-filling; note the precautions used.

3. Drying Penicillin-C.S.C. under high vacuum.

4. The C.S.C. Research Building. A quarter century of research and experience in microbiotic procedures backs Penicillin-C.S.C.

5. The C.S.C. penicillin plant.

# PENICILLIN-C.S.C.

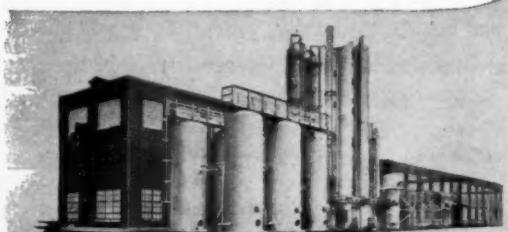
THE continually expanding production of Penicillin-C.S.C. now exceeds SEVENTY BILLION Oxford Units per month, providing more than SEVEN HUNDRED THOUSAND individual rubber-stoppered, aluminum-capped, serum-type vials of 100,000 Oxford Units each.

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5



A. Remove aluminum tear-off seal, insert needle through rubber stopper, inject 20 cc. of saline.

B. After slight agitation invert vial with needle in situ and withdraw amount of solution (5000 Units per cc.) desired.





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| Maltose . . . . .     | 24%   |
| Mineral Ash . . . . . | 0.25% |
| Moisture . . . . .    | 0.75% |

Available carbohydrate 99%

115 calories per ounce

6 level packed tablespoonfuls

equal 1 ounce

Containers of 12 oz.

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*Literature on request*

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*Literature on request*



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## *Dietary Protein after Surgery and Other Trauma*

apparently must be maintained at a level above normal in order to assure proper wound healing\* and at least average resistance against infection.\*\* The feeding of meat, therefore, in adequate amounts, as soon as it can be instituted, appears doubly advantageous: the protein content of meat is high and of highest biologic value; the human digestive tract appears well adapted for handling meat protein.\*\*

\* " . . . in a variety of medical and surgical conditions there may occur a considerable depletion of body protein owing to a combination of factors, of which the two most important are a generally diminished protein intake and an enhanced protein catabolism. This situation inhibits wound healing, renders the liver more liable to toxic damage, impedes the regeneration of hemoglobin, prevents the resumption of normal gastrointestinal activity and delays the full return of muscular strength. It is obvious that to meet the situation an adequate supply of proteins and calories must be made available to the body. . . . This implies at least 150 Gm. of protein and 3500 calories, with as much as 500 Gm. of protein daily when trauma has been severe, as in serious burns." (HOFF, H. E.: Physiology, New England J. of Med. 231:492 [Oct. 5] 1944.)

\*\* "Cannon . . . cites the evidence which indicates that diminished protein intake lowers resistance to infectious disease, and corroborates it by his own experiments . . . it seems probable that the small intestine is better adapted for handling protein (especially meat protein) than for other types of food. . . . it is especially well supplied with enzymes which attack protein, and the digestion of meat has been shown to be more complete than that of foods of vegetable origins." (CRANDALL, L. A., Jr.: The Clinical Significance of the Plasma Proteins, Memphis M.J. XIX:147 [Oct.] 1944.)

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



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ELIXIR 'B-G-PHOS' will be found to be an exceptionally palatable preparation. It stimulates a healthy appetite, aids assimilation by increasing absorption and the flow of gastric juices, and tends to accelerate the activity of gastric ferments.<sup>5</sup>

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1. Science, 97:385, 1943. 2. J. A. M. A. 119:945, 120:831, 1943; Digest of Treatment, 6:835, 1943; New England J. Med. 228:8, 1943. 3. New England J. Med. 228:118, 1943. 4. South. Med. J. 34:89, 1941.

*Elixir* 'B-G-PHOS'



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|                                  |                            |
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| Vitamin C.....                   | 50 mg., 1,000 U.S.P. Units |
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| Niacinamide .....                | 20 milligrams              |
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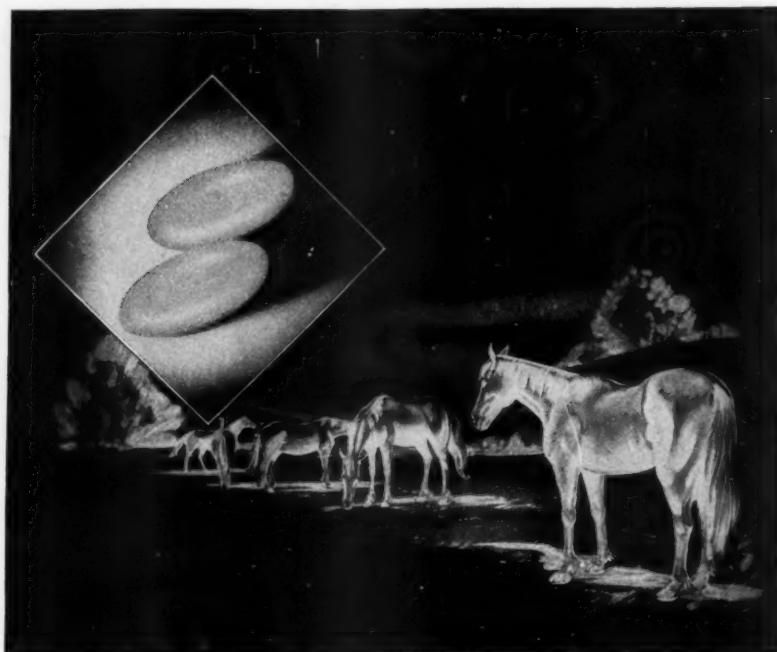
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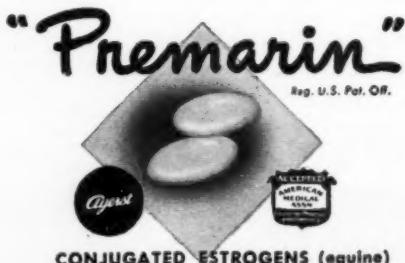


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"Premarin", although one of the most potent oral estrogens, is derived exclusively from natural sources. The published reports of many outstanding clinicians indicate that in "Premarin" the physician will find the desirable characteristics of both the natural and synthetic estrogens. Even though "Premarin" is highly potent, unpleasant side effects are seldom noted. In fact, most workers have commented on the feeling of well-being reported by the patient on "Premarin" therapy.

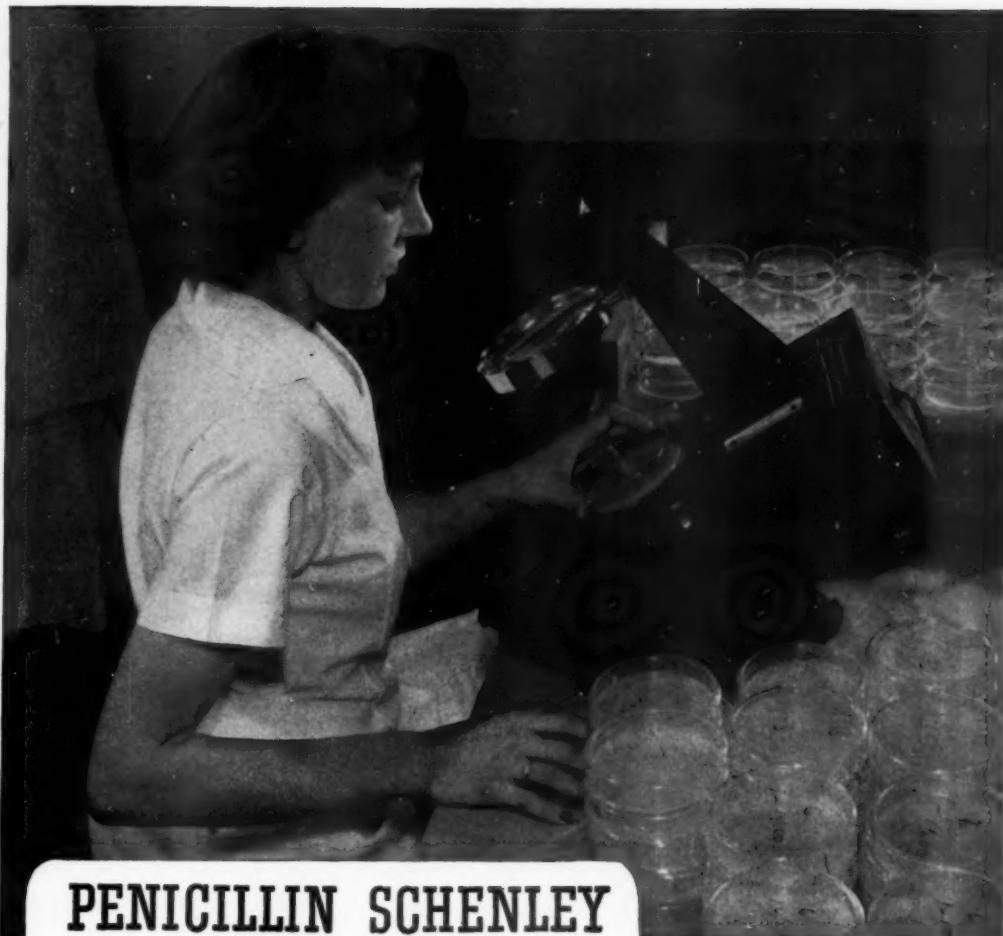
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WATER SOLUBLE  
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The penicillin which first attracted the attention of Alexander Fleming was an "occurrence of nature", with no control exercised over the conditions of its production. Production of pyrogen-free penicillin for the medical profession, however, is accomplished only by the most elaborate methods of control for insuring highest attainable productivity, potency, and purity.

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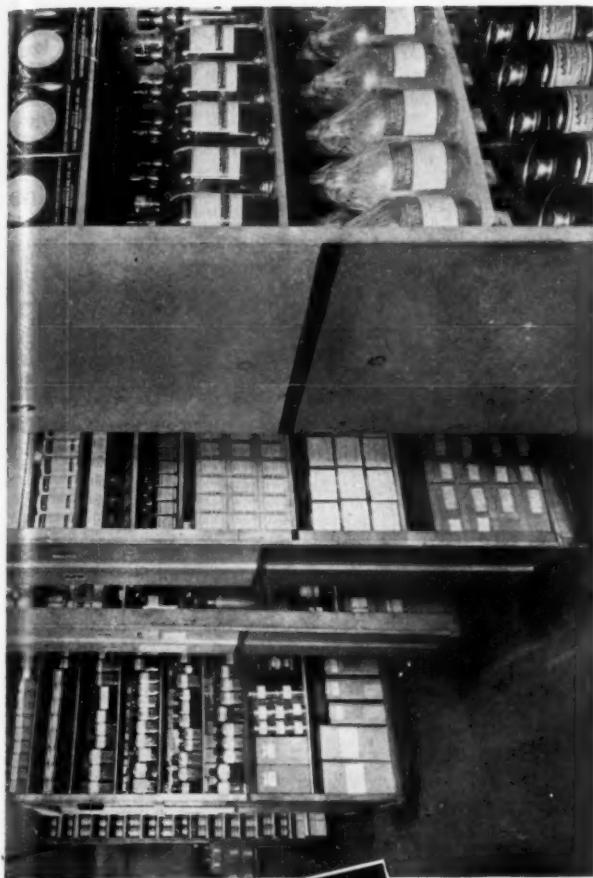
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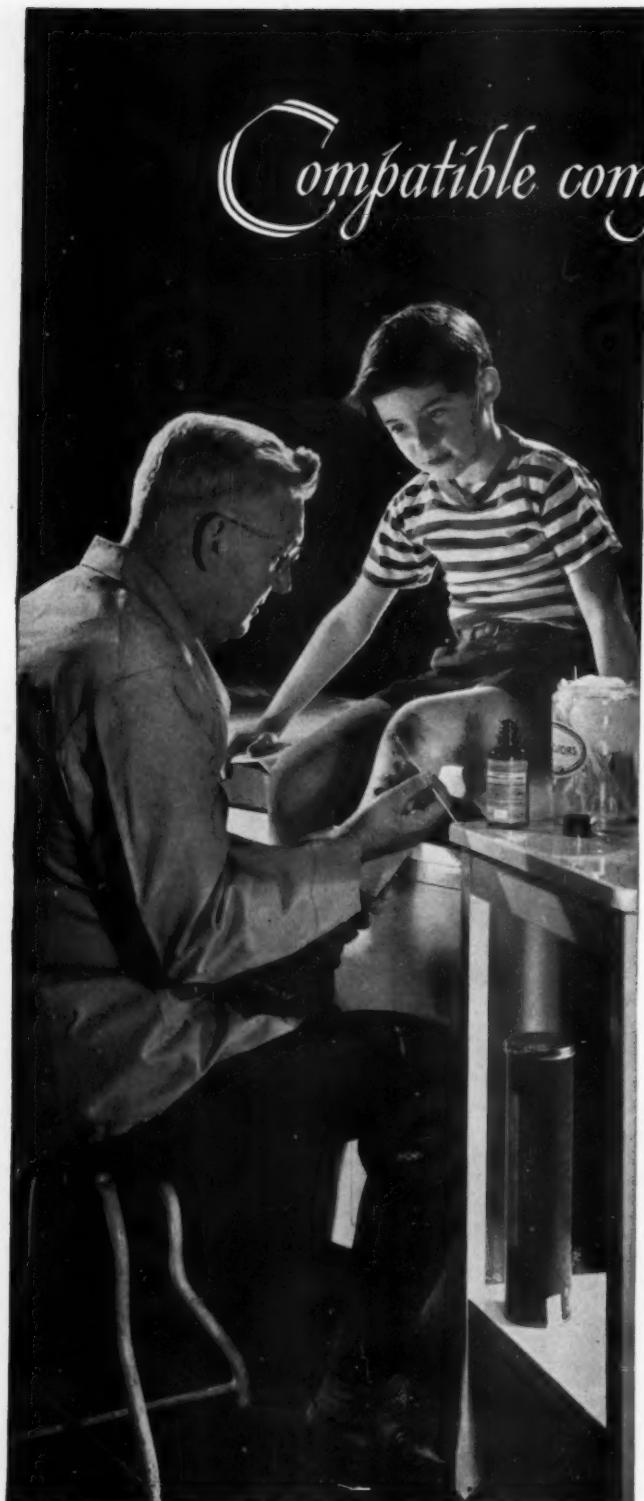
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## GANGLIONEUROMA OF THE MEDIASTINUM

HOWELL RANDOLPH, M. D.

*Phoenix, Arizona*

NERVE tumors involving the root ganglia of the dorsal segments of the spinal column or the intercostal nerve trunks, are occasionally seen and are chiefly of interest because they are amenable to surgical removal. Kent et al have given a comprehensive review, assembling 74 Mediastinal tumor cases from literature and adding 18 cases from Barnes Hospital. In addition there were 27 chest wall tumors listed. A considerable number of these tumors have been successfully removed, even as far back as 1870. There has grown a general impression that they are always benign, but as pointed out by Kent some have been found to show microscopically, malignant characteristics and a few of them have developed metastases. Others have shown rather rapid growth and have been inoperable as a result of invasion of the vital structures of the mediastinum. In a few cases ganglioneuroma growth extended into the spinal column, (so-called hourglass tumor) and have produced pressure symptoms which were relieved by laminectomy and removal of the spinal tumor.

The clinical characteristics of these tumors indicate that they are usually of slow development and may exist for several years without discovery. The earliest symptoms may be the result of vasomotor disturbances, later, pressure symptoms, involving the region to which adjacent nerves may be distributed. Pain is not a prominent symptom until size of the tumor is sufficient to cause pressure. Shortness of breath, heaviness in the chest, pain radiating into the shoulder or neck, flushing of the face, are occasionally observed. Certain reported cases show tumors weighing several pounds before the symptoms produced lead to their discovery. The prognosis after diagnosis is poor if not operable, in other words, if symptoms have developed to a point indicating involvement of vital structures. The tumors are usually resectable because of the fact that they stem from the ganglion or nerve trunk and develop on a pedicle with cystic encapsulation. The capsule may be readily stripped from the surrounding tissue without leaving residual tumor elements. Recurrences are rare but a predisposition to nerve tumor development may be present, and the

same type of tumor has been found in other parts of the body.

Pathologically there are varying degrees of ganglionic elements scattered throughout the stroma of neurofibromatous tissue growth. The character and number of the ganglion cells are indices as to possible malignancy.

Surgical treatment is the only method of value in dealing with these tumors. Out of 126 cases of all types of mediastinal and chest wall tumors, there were 34 deaths, 18 who died following operation and 16 were discovered at autopsy or were considered inoperable. Surgical approach depends upon location of the lesion, as about 85% are located in the posterior mediastinum. Section of the ribs adjacent to the tumor, near the costal angle gives adequate exposure for smaller tumors, and has the advantage over resection of the rib in making better repair of the chest wall.

### REPORT OF A CASE

Patient H. J., age 21 came for examination September 18, 1944, complaining of feeling of shortness of breath following a fright from a near miss of his truck by a lightning flash. He had been perfectly well, but about eighteen months before first seen he was rejected by the Army for "scar tissue" on the lungs. Since then he has worked at hard work driving for a delivery service handling 500 crates of eggs daily. He has been rather nervous and states that he is easily upset and emotional, has no appetite for breakfast, and has had occasional headache behind the right eye during the past 2 years.

#### *Present Illness*

After the onset of the shortness of breath the patient continued to work the next three days but he states he noticed there was a choking sensation and a tightness in the upper right chest on deep inspiration. There was some sharp pain, not severe, in the chest, none in the arm,

#### *Family History*

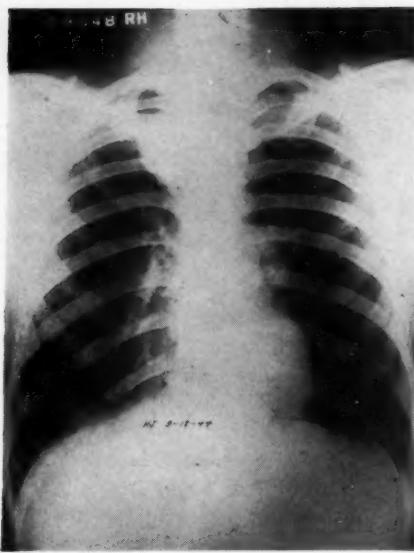
The patient's father has an arrested tuberculosis, no co-residence of active tuberculosis for many years. His mother is well, one sister well, one grandfather died of cancer.

#### *Past History*

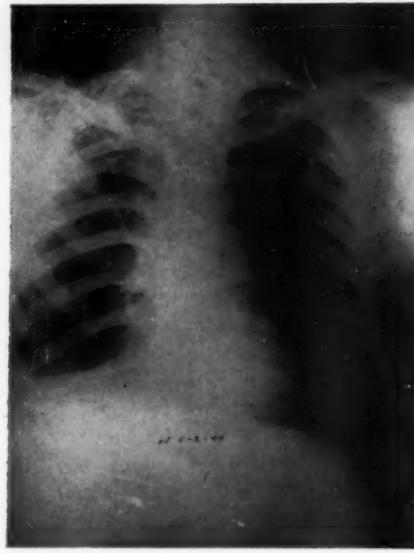
Pneumonia 1939. Appendectomy.

#### *Physical Examination*

Temperature 99.2. Pulse 82. Height 71 inches. Weight 166 pounds.



A. Before removal.



B. After removal.

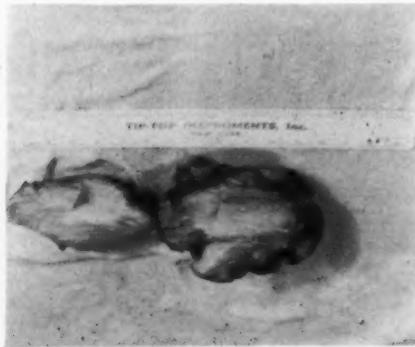
Excellent general condition, well muscled and tanned. Slight halitosis. Teeth good. Large cryptic tonsils. Heart sounds clear. Blood pressure 130/70. Abdomen negative. Extremities negative. There was a loud lub-dub just above the clavicle on the right side, no murmur. Indirect laryngeal examination show chords normal.

Fluoroscopic examination demonstrated clearly that the tumor was located in the posterior mediastinum.

#### *Operation*

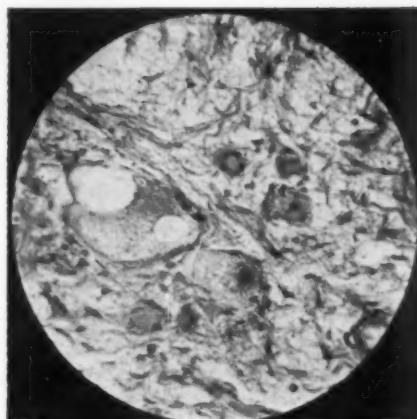
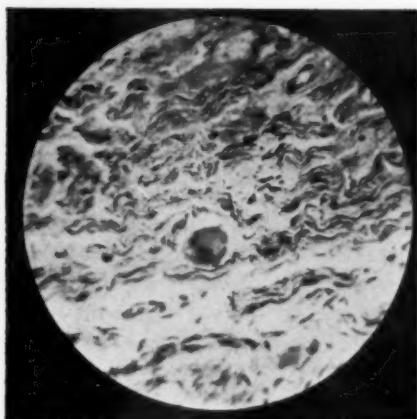
Under intra-tracheal nitrous oxide ether anesthesia a seven-inch paravertebral incision was made from the level of the second rib through the muscles, exposing the rib cage. The third, fourth, and fifth ribs were stripped of periosteum, sectioned near the angle and retracted. These ribs were not excised. The tumor was

found lying in the costo-vertebral gutter and was removed by blunt and sharp dissection with considerable difficulty. The capsule was stripped from the overlying pleura and an attempt was made to perform the enucleation extrapleurally. Dense adhesions between capsule and pleura made this impossible, therefore a sharp incision was made into the pleura allowing the lung to collapse adjacent to the tumor, this allowed adequate exposure and the tumor was freed. It extended from the upper margin of the third rib to the lower margin of the sixth rib. A moderate amount of bleeding was encountered. The blood supply was from the fifth intercostal, which was transfixated and ligated. The pleura was sutured tightly with the anesthetic pressure increased to completely re-expand the lung and the muscles were repaired in two layers, no drain.



After fixation in formalin





*Pathologists Report*

(Dr. Maurice Rosenthal)

**Gross:** The tumor was a roughly oval-shaped mass, presenting a thin capsule and measuring 7.5x5x3 cm. One surface was rough, fibrous, and nodular in appearance. The other surface was smooth and light yellowish-gray in color. The cut surface presented a smooth, glassy, edematous, myxomatous appearance which was light yellowish-gray in color. The gross architecture presented an irregular lattice network. There were no cysts nor hemorrhages present.

**Microscopic:** The section reveals a loose, edematous, fibrillar stroma in which a moderate number of large ganglion cells are seen. Many of these cells are binuclear or polymorphonuclear. Degenerative changes in the cytoplasm are seen. A few of them contain a dark brown pigment. Some of the cells present multiple processes and show an enveloping capsule.

The fibrous components of the tumor include myelinated and unmyelinated nerve fibers. Many of the cells are small and round but present the histological characteristics of nerve cells. No immature undifferentiated cells or other evidence of malignant transformation is noted.

**Diagnosis:** Ganglioneuroma, benign.

*Course in the Hospital:*

Immediate post-operative condition very good. Pulse went to 130 second day, temperature 101 for two days. Attempted aspiration of fluid resulted in withdrawal of only 5 cc. of slightly bloody fluid. Patient was discharged from the hospital on the sixteenth day. He returned to light work in one month.

*Summary*

A case of mediastinal ganglioneuroma is reported with operative removal and recovery.  
15 E. Monroe

## Symposium on the Treatment of Syphilis\* "THE MODERN ROUTINE TREATMENT OF SYPHILIS"

LOUIS G. JEKEL, M. D.

Phoenix, Arizona

### TREATMENT ROUTINE FOR

#### UNCOMPLICATED LATENT SYPHILIS

THE schedules outlined herein for the routine treatment of uncomplicated latent syphilis are practically, if not exactly, the same as those recommended by the Co-operative Clinical Group and the United States Public Health Service. These schedules have greatly reduced

the total amount of treatment from that which it was formerly customary to give. This reduction in the total amount of treatment is the most important point to be offered by this paper.

The drugs and dosages used in this program are as follows:

1. Mapharsen—intravenously
  - (a) Body Weight—  
120 lbs. or less.....0.04 gm.
  - (b) Body weight—  
120 lbs. to 180 lbs.....0.06 gm.

\* Presented before the Maricopa County Medical Society, Nov. 6, 1944.

- (c) Body weight—  
180 lbs. or more.....0.08 gm.
- (d) For children—  
1.0 mgm. per Kg. body weight.
- 2. Neoarsphenamine—intravenously
  - (a) Body weight—  
120 lbs. or less.....0.45 gm.
  - (b) Body weight—  
120 lbs. to 180 lbs.....0.60 gm.
  - (c) Body weight—  
180 lbs. or more.....0.90 gm.
- 3. Bismuth subsalicylate—intramuscularly
  - (a) Average weights.....0.2 gm.  
(1.5 cc. of 0.13 gm. per cc.)
  - (b) Proportionately more or less for larger or smaller patients.
  - (c) For children, 2.0 to 4.0 mgm. per Kg. body weight.
- 4. Sulpharsphenamine—intramuscularly
  - (a) 5.0 to 10.0 mgm. per Kg. body weight first dose.
  - (b) 25 mgm. per Kg. body weight thereafter.

#### VERY EARLY SYPHILIS

System I is used for primary (sero-negative or sero-positive) and secondary syphilis and early latent syphilis of less than two years duration if uncomplicated and untreated. Dark-field examinations are done on all genital lesions at the time of the physical examination. At least two persons must agree that a dark-field examination is positive before treatment is instituted on this basis alone, and a note with the observers' names is to be entered on the patient's chart. The diagnosis of untreated syphilis must not be made without adequate laboratory confirmation.

The patient is seen twice each week. At one of these visits he receives mapharsen alone; at the other he receives both mapharsen and bismuth. This course extends through twenty weeks so that the patient receives forty injections of mapharsen and twenty of bismuth. When this course of treatment is completed the spinal fluid should be examined. If it is negative the patient is probated and advised to return in six months for a check-up, including another spinal fluid examination. If the blood titer remains low and the screen examination, and spinal fluid examination are still negative, probate another six months. If the spinal fluid findings are positive upon completion of treatment, treat as indicated for neurosyphilis.

#### EARLY LATENT SYPHILIS

System II is used for uncomplicated early latent syphilis of more than two years and less than four years duration. If it is impossible to determine accurately the date of infection a patient less than twenty-six years of age is classified as early latent, whereas a patient over that age is classified as late latent. Two positive serological tests are required before treatment is started. Spinal fluid examination is done at the beginning of the course instead of at the end as in System I, and a negative spinal fluid is necessary, or else this system is not used.

The patient is seen once each week for the first ten weeks and receives mapharsen and bismuth both at the same visit. During the second ten-week period the patient receives an injection of mapharsen twice each week. During the third ten-week period injections of mapharsen and bismuth are given at the same visit once each week. A total of 40 injections of mapharsen and 20 of bismuth are administered. The course of treatment extends through thirty weeks.

At the completion of this course of treatment a serological test is performed and the patient is advised to return in six months. The probationary program is conducted the same as with System I.

#### LATE LATENT SYPHILIS

System III is used for uncomplicated late latent syphilis when the infection is thought to be of four years duration or more. Two positive serological tests are required for this diagnosis. A spinal fluid examination is performed before treatment is begun and a negative result is necessary if System III is to be adopted.

The patient reports for treatment once each week. During the first ten-week period bismuth is administered. From the eleventh to the twenty-fifth weeks mapharsen is injected. During the final ten weeks bismuth is again given. A total of twenty injections of bismuth and fifteen of mapharsen are administered over a period of thirty-five weeks. At the end of the course of treatment a quantitative serological test is performed. The patient is advised to return in six months for a screen examination and another quantitative serological

test. Probably no more treatment will be required. A negative serological reaction is not anticipated.

#### EARLY CONGENITAL SYPHILIS

Congenital syphilis is classified as early congenital syphilis when the patient is less than two years of age. The schedule outlined below is followed.

| Week  | Drug                         |
|-------|------------------------------|
| 1-7   | Sulpharsphenamine            |
| 8-11  | Bismuth Subsalicylate in Oil |
| 12-19 | Sulpharsphenamine            |
| 20-25 | Bismuth                      |
| 26-33 | Sulpharsphenamine            |
| 34-41 | Bismuth                      |
| 42-49 | Sulpharsphenamine            |
| 50-59 | Bismuth                      |

Thereafter ten weekly doses of each drug are administered in alternating courses. Treatment is carried out over a period of eighteen months. A serological test is performed before each course of arsenical drugs, and a spinal fluid examination is done sometime before completion of the treatment.

The patient is advised to return in six months for physical examination and serological tests. This is to be repeated each year.

#### LATE LATENT CONGENITAL SYPHILIS

Late congenital syphilis is the congenital syphilis of persons more than two years of age. Two positive serological tests are required to establish the diagnosis. Physical examination is performed and the spinal fluid is examined before treatment is begun. The following schedule is used:

| Week  | Drug      |
|-------|-----------|
| 1-6   | Bismuth   |
| 7-16  | Mapharsen |
| 17-26 | Bismuth   |
| 27-36 | Mapharsen |
| 37-46 | Bismuth   |
| 47-56 | Mapharsen |

Treatment is carried out during a period of one year. The probationary program is the same as that given for early congenital syphilis.

#### SYPHILIS DURING PREGNANCY

Two schemes are presented below which will be found to be satisfactory in the treatment of most cases of uncomplicated syphilis during pregnancy. The patient is told that the treatment is really for the baby rather than for the

mother. It should be noted that both schedules are arranged so that an arsenical drug is administered during the last few weeks of gestation.

| Week of Gestation | Beginning in First Trimester | Beginning in Second Trimester |
|-------------------|------------------------------|-------------------------------|
| 1                 | Mapharsen                    |                               |
| 2                 | "                            |                               |
| 3                 | "                            |                               |
| 4                 | "                            |                               |
| 5                 | "                            |                               |
| 6                 | "                            |                               |
| 7                 | "                            |                               |
| 8                 | "                            |                               |
| 9                 | Bismuth                      |                               |
| 10                | "                            |                               |
| 11                | "                            |                               |
| 12                | "                            |                               |
| 13                | "                            | Mapharsen                     |
| 14                | "                            | "                             |
| 15                | "                            | "                             |
| 16                | "                            | "                             |
| 17                | Mapharsen                    | "                             |
| 18                | "                            | "                             |
| 19                | "                            | "                             |
| 20                | "                            | "                             |
| 21                | "                            | "                             |
| 22                | "                            | "                             |
| 23                | "                            | "                             |
| 24                | "                            | "                             |
| 25                | Bismuth                      | Bismuth                       |
| 26                | "                            | "                             |
| 27                | "                            | "                             |
| 28                | "                            | "                             |
| 29                | "                            | "                             |
| 30                | "                            | "                             |
| 31                | "                            | "                             |
| 32                | "                            | "                             |
| 33                | Mapharsen                    | Mapharsen                     |
| 34                | "                            | "                             |
| 35                | "                            | "                             |
| 36                | "                            | "                             |
| 37                | "                            | "                             |
| 38                | "                            | "                             |
| 39                | "                            | "                             |
| 40                | "                            | "                             |

#### SUMMARY

The routine treatment of uncomplicated latent syphilis in various stages is discussed. The dosages of different anti-luetic drugs are given. Schedules are presented which will be found to be adaptable in various cases.

These treatment schedules are given to apply only to uncomplicated latent syphilis, except for those applying to early congenital syphilis.

No case of syphilis can be definitely diagnosed as latent until the spinal fluid has been examined and found to be negative.

The modern trend is to administer treatment over a shorter period of time with a smaller total dosage than that used in the past.

Our ideas concerning the treatment of syphilis are and should continue to be changeable.

Recent rapid treatment methods with arsenic, bismuth, penicillin, fever therapy, and perhaps other methods may cause us to abandon completely the treatment programs presented here.  
15 E. Monroe

## "THE RAPID TREATMENT METHODS"

PAUL S. ARMOUR, M. D.  
*Phoenix, Arizona*

**W**AR furnishes ideal conditions for the spread of syphilis and other venereal diseases. The syphilis problem confronting the home front practitioner today is largely that of early syphilis. Many of these luetic patients are migratory, uncooperative and promiscuous. The need for rapid control of infectiousness warrants consideration of treatment systems requiring hospitalization for from five to ten days therapy. Other semi-intensive methods may be used for more prolonged schedules, say four to six weeks, as all syphilitic patients are not unreliable. The old eighteen months to two years treatment schedule, however, is definitely out.

At present there is no optimum schedule or system of treatment. Rapid methods range from one day to twenty-six weeks. The curative dose of Mapharsen (the arsenical of choice recommended by the U. S. P. H. S.) is believed to be a constant. It is independent of the schedule of treatment, twenty-five to thirty mgms. per kilo of body weight being considered adequate dosage; 1200 to 2400 mgms. being the total advised per patient. Bismuth, a heavy metal, is given along with the Arsenic because it seems to have an extra ordinary effect in reducing treatment failures. Bismuth Subsalicylate in Oil is the preferred preparation.

Arsenic should be given according to weight. There should be no arbitrary distinction between sexes with respect to dosage.

Schedules of early treatment of syphilis depend on the mortality one is willing to accept. When an intensive method is selected, the added risk must be borne in mind.

We will discuss briefly a number of rapid methods. These apply to cases of early syphilis, e.g. Sero-negative primary, Sero-positive Primary, Secondary, and Early Latent:

### *I Fever Therapy*

For a while fever therapy offered favorable

possibilities in the treatment of early syphilis. At the present time, and in fact for the past fifteen months or thereabouts, such treatment has been given to many patients in Jacksonville, Florida and Chicago, Illinois rapid treatment centers. This type of treatment requires the constant supervision by a doctor skilled in fever therapy and a trained attendant should always be with the patient during treatment. The mortality is around one-half to one percent. The patients must be selected and be healthy subjects. The infectious relapses are twenty to forty percent after this period of observation, namely twelve to fifteen months.

Fever kept at 106°F for eight hours, and at 106°F for five hours, are the two systems used. Additions include one dose of arsenic during this time (early, height, end) and Bismuth one time weekly for eight weeks afterwards.

When the fever therapy is supplemented with Arsenic and heavy metal the end results are not much improved. (twelve to fifteen months observation).

### *II The Five Day I-V Drip*

The Five Day I-V Drip resulted in rather high mortality and morbidity and has been largely discontinued.

### *III The Eight Day I-V Drip*

The Eight Day I-V Drip is being used now in many of the rapid treatment centers (over sixty altogether) in the United States, Porto Rico, and the District of Columbia, with more gratifying results. The mortality and morbidity is much less. The amount of Arsenic determined by body weight is divided into eight equal parts, and one part dissolved in 2000cc of five percent dextrose and given slowly intravenously, and this amount given daily for eight days. On the first, fifth, and eighth days Bismuth is given and one time weekly thereafter for eight weeks.

***IV Multiple Injection***

Multiple Injection methods are those in which one dose of Arsenic is given intravenously daily for twenty-four, thirty, or thirty-six days, Bismuth being given twice weekly.

***V Local Method***

Our method in the Maricopa County Health Unit is, two Arsenic weekly for twenty weeks, one Bismuth weekly for twenty weeks, making a total of forty Arsenic and twenty Bismuth.

***VI Six Weeks Method***

The Six Weeks Method is a method we have used in the Detention Clinic with very satisfactory results as far as lack of treatment reactions are concerned. Arsenic is given four times weekly for six weeks, making a total of twenty-four. Bismuth is given two times weekly for six weeks, making a total of twelve.

***VII The Army Method***

The Army Method used in the United States of America (more rapid treatments are used in the battle areas) is the same as ours except that twenty-six weeks are required instead of twenty.

Penicillin is rapidly taking the place of this method and others by the U. S. Army.

***VIII Penicillin***

Penicillin holds great promise in therapy of syphilis. Take two initial lesions of syphilis, the so-called chancre, treat one case with Penicillin, the other with Arsenic, Treponema Pallada will disappear from the patient treated with Penicillin much more rapidly than the one treated with Arsenic, and the lesion of the former heals quicker. The systems followed at present for Penicillin therapy of syphilis are:

(1) 1,200,000 units of Penicillin given intramuscularly over a period of eight days (20,000 units for three hours) x 60.

(2) 2,400,000 units of Penicillin given intramuscularly over a period of eight days (40,000 units for three hours).

(3) 600,000 units of Penicillin (10,000 units for three hours for sixty injections.) Plus Arsenic 1 daily x 8 and Bismuth 1-5 8th day.

Because of the long period of observation necessary for evaluation of any new anti-syphilitic agent, the ultimate value of Penicillin in syphilis is not yet known. After one year of observation, early cases of lues, given the larger dosage of Penicillin, have not suffered clinical or serological reversal except in very small percentages.

**LATE LATENT SYPHILIS**

In a Late Latent case (over four years), the only indication of syphilis is a positive blood plus a re-check. Do not expect a sero-reversal. In early syphilis sero-reversal is the rule. In Late syphilis, sero-reversal is the exception, and not the rule.

The prognosis for Late Latent cases, high or low titer, positive serology, negative spinal, is good. Seventy percent will never develop any serious complication, and will live in perfect symbiosis with their disease if untreated. If treated, eighty to ninety percent will get along satisfactorily. Of the thirty percent who will kick up, many will develop benign complications. A small amount of treatment is all that is needed, not eighteen months. Six to eight months of treatment is adequate. The reason for lack of serological reversal in Late Latent syphilis is thought to be because the organisms are entrenched and not reached by Arsenies. (Area of fibrosis into which the Arsenic does not infuse). Late Latent syphilis under treatment, five to ten percent will give serological reversal. Late Latent syphilis is generally over-treated. Late Latent syphilis requires less treatment than Early syphilis.

1206 West Madison

**THE TREATMENT OF NEUROSYPHILIS**

LOUIS SAXE, M. D.  
Phoenix, Arizona

THE treatment of neurosyphilis presents problems somewhat different from those encountered in the other forms of syphilitic infection. Many patients do not develop symptoms of neurosyphilis and some fail to show

serological evidence of infection of the nervous system by present laboratory methods and clinical methods. When the infection becomes manifest in the central nervous system, it becomes difficult to treat because of the inaccessibility

of the brain, the cord and its coverings, and special methods are required.

The treatment of neurosyphilis should be primarily prophylactic. This statement may be repeated—the treatment of neurosyphilis should be primarily prophylactic. The energetic treatment of all cases of early syphilis would probably prevent the development of neurosyphilis except for the few cases of the parenchymatous type. These may also be prevented when we thoroughly understand the factors preventing parenchymatous involvement in one case and permitting it in another. Asyntomatic neurosyphilis must be treated strenuously by routine methods and when progression continues in spite of such treatment, special therapies should be considered. In neurosyphilis each case must be considered individually and treatment planned according to all the facts—clinical, laboratory and social, in each case. The outlines that are herewith presented are suggestions in planning the therapy in the particular case. The present treatment of syphilis is now undergoing changes. The introduction of massive dose methods and the present experimental trends with penicillin will not be discussed because the proper evaluation of these methods can not now be made.

#### Outline of therapy in various types of neurosyphilis

##### (a) Asyntomatic neurosyphilis;

"The prognosis of asyntomatic neurosyphilis is equally gloomy whether discovered early or late in the course of the infection, unless the development of clinical neurosyphilis is prevented by appropriate intensification or modification of treatment" (Moore) The difference in management lies in the degree and type of "intensification" used. Intensification should mean an increased dosage of arsphenamine-like drugs given every 4 to 5 days and given by the continuous program. Patients with Group I serology may respond to this program. If at the end of 3-6 months evidence of progression or in the face of failure to improve tryparsamide and fever therapy must be used.

#### Outline for Group I and II serologies (See blackboard)

1. 20 injections of tryparsamide of 3 grams each.
2. 6 weekly injections of mapharsen of maximum weight dosage .06.

3. Recheck of neurological, mental physical and blood and spinal fluid examinations.

If improved.

4. Repeat 1.

5. Six weekly injections of bismuth in oil of .26 grams each. Repeat 3 etc.

If the examination at 3 shows progression, no change in the spinal fluid and the routine Group III and IV is substituted.

#### OUTLINE FOR GROUP III AND IV

1. Fever therapy.

- a) Malaria therapy 50 hours of fever above 104°F (R).

- b) Artificial fever therapy 36 hours of fever at 105°F (R).

2. 20 injections of tryparsamide of 3 grams each weekly and with 8 injections of bismuth salicylate of .26 grams each during the first 8 weeks of tryparsamide therapy.

3. 6 weekly injections of mapharsen of .06 grams each.

4. Re-examination physical, neurological, mental and complete serology.

5. 20 injections of tryparsamide.

6. 6 injections of bismuth.

7. Repeat 4 and 5 etc. for a minimum of 2 years continuous therapy, or for one year after the spinal fluid serology is reversed, or for a minimum of 3 years of treatment in cases who remain serologically positive in spite of continuous treatment.

If at any time there is evidence of clinical progression the fever therapy should be repeated. With this routine almost all cases respond favorably. Those who fail to do so usually have the paretic formula (Group IV) when first diagnosed and they usually develop clinical signs of tabes dorsalis or general paresis. In these cases, however, the clinical symptoms are usually of the mild type and continuous energetic treatment will usually result in a satisfactory remission.

Simpson reports that 61% become seronegative when treated with combined fever and chemotherapy and found definite improvement in another 16%.

Troutman of the U. S. Public Health Service found reversals in 66% of his cases treated by chemotherapy-fever method and reported no development of clinical signs of neurosyphilis during his period of observation.

(b) *Meningeal neurosyphilis*

Acute syphilitic meningitis represents a medical emergency and prompt treatment is indicated. Where the intracranial pressure is increased withdrawal of more than the usual amount of spinal fluid may decrease the intensity of the headache. Give bismuth with arphenamine-like substance at 3-5 days intervals.

For the energetic treatment of meningeal syphilis fever therapy may also be instituted.

1. 12 bi-weekly heatings of 3 hours each at a temperature of 105.8°F (R).
2. With each heating administer mapharsen .04 and bismuth salicylate .26 grams.
3. Then 20 injections of tryparsamide of 3 grams each.
4. Re-examination of clinical and serological status.
5. If spinal fluid and clinical picture are improved or normal give 12 weekly injections of mapharsen .06 grams each, then
6. 12 weekly injections of bismuth of .26 grams each, then
7. 20 weekly injections of tryparsamide, etc.

Complete clinical and serological re-examinations should be made each six (6) months.

Chronic luetic meningitis is treated by the same routine. Fever need not be given at the first stage in treatment and the patient may require a course of chemotherapy before fever is instituted. Malaria may be given this type of infection with beneficial results, it is of course not effective in the fulminating type because of the incubation period of the organism.

Death rarely occurs in the early phase of meningeal neurosyphilis. Many of the acute cases recover from all symptoms if properly treated but they should continue for a minimum of 2½ to 3 years of continuous treatment irrespective of the clinical or serological improvement. About 30% of improperly treated cases will show progression to the more serious forms of neurosyphilis. A few cases will recover from

the acute phase only to later develop symptoms of the tabetic or paretic type. In these cases the more radical treatment of administering fever therapy and pentavalent arsenicals in the early stage of the disease is favored. The surgical treatment of the chronic form of meningitis often does little to arrest the progression of the disease if the other methods fail. Often the adhesions reform after a quiescent period of 6-8 months, and the progression of the optic atrophy continues.

*Vascular and Diffuse Meningo-Vascular Neurosyphilis*

The treatment problems in these two forms of syphilis are essentially the same and will be presented together, these forms of neurosyphilis offer more difficulties in treatment than the other forms because too energetic type of treatment will result in the death of the patient and too little treatment will result in the progression of the disease. The unpleasant fact is that the vessel walls are involved in the luetic process and that intensive treatment will produce a rapid dissolution of this tissue and that a hole may be produced in the vessel wall. Treatment is instituted with the hope that the luetic tissue will be replaced by scar tissue and prevent the formation of the hole.

*Outline.*

1. 12 weekly injections of bismuth salicylate of .26 grams each.
2. 12 weekly injections of mapharsen beginning with .03 grams and increasing to maximum according to body weight.
3. Complete clinical and serological re-examination.
4. If stationary or improved 20 weekly injections of tryparsamide 3 grams each.
5. Repeat bismuth and mapharsen.
6. If at the end of 6 months there is no recurrence of the vascular phenomena and there is evidence of beginning parenchymatous involvement, the fever—chemotherapy routine used in general paresis should be used.
7. If there is rapid progression with convulsions or vascular phenomena one must follow treatment according to the individual details of the case. Fever therapy is not without danger and in those who suffer vascular accidents it is considered dangerous. Tryparsamide then re-

mains the treatment of choice. If the progression is that of the paretic type fever therapy may be used in spite of the hazards involved.

Many patients with this form of neurosyphilis respond favorably to a conservative form of treatment, to the convulsive phenomena and hemiplegia remain as an evidence of their disease, but they show little progression. The chemotherapy should continue for a minimum of 2½ to 3 years. Treatment must be continued, and in those who do not take this course 80% have a satisfactory response, those who do not usually develop the signs and symptoms of general paresis or become permanent cripples due to major vascular accidents.

#### *Parenchymatous Neurosyphilis*

##### A) General paralysis of the insane— General Paresis.

Treatment is immediate, intensive and prolonged. This most feared type of syphilis could probably be prevented in the majority of the cases by adequate treatment of early syphilis or by the energetic treatment of neurosyphilis in the asymptomatic phase. Some believe that a small number of patients will develop paresis irrespective of the treatment in the early stage. However, to repeat, the treatment of neurosyphilis should be considered prophylactic.

##### *Outline for General paresis*

1. Fever Therapy
  - a) Malaria therapy  
50 hours of fever at a temperature above 104°F (R)  
or
  - b) Artificial Fever therapy  
at least 12 heatings of 3 hours each  
at a temperature of 105°F (R)  
given twice weekly Chemotherapy is given with each heating.
2. Tryparsamide. 20 weekly injections of 3 grams each combined with 12 weekly injections of bismuth salicylate.  
or  
Alternate the bismuth about the third day.
3. Then 12 weekly injections of mapharsen. Repeat the above for a period of 3 years. Complete clinical and serological re-examination.
4. Patients should remain under observation during the remainder of their life with annual checkups.

##### b) *Tabes Dorsalis*

Here too the treatment is intensive continuous and prolonged. The plan followed in paresis should be used in tabes. Fever therapy is objected to because it is claimed to hasten optic atrophy, however, it has been advocated in the treatment of optic therapy. The Swift-Ellis technique is suggested in those cases with signs of optic atrophy, and in those suffering from lightning pains. In the hands of an experienced roentgenologists relief may be obtained by deep X-ray therapy over the lower dorsal and upper lumbar spine. The procedure is as follows; 300 Roentgens per treatment—give three (3) treatments at 2 day intervals. (Using 10x20 portal over the lower cord region, depending upon the response may then treat the upper cord. Give at 200 K.V using ½ copper plus one aluminum filter.)

##### C) Primary optic atrophy.

Primary atrophy of the optic nerve is the most difficult form of neurosyphilis to treat and usually results in blindness, unless treatment is vigorous and early. Moore states "only two forms of treatment seem to be of any avail, subdural therapy or fever therapy; and one of these should be adopted as soon as the diagnosis is made. Any other therapeutic efforts are usually useless in arresting visual failure and constitute dangerous temporizing." He favors subdural therapy. He recommends the use of arsphenaminized serum starting with a dose of 5 cc. and increasing to 15 cc. introduced cisternally. The treatment is given every two weeks and administered not more than 6 times. The prognosis is grave.

#### *For the Blackboard*

##### *Asymptomatic Neurosyphilis—*

###### Spinal fluid findings.

Group I Cell Count, 10 or more; Globulin, pos. or neg.; Wasserman, neg.; Colloidal Gold, no change.

Group II Cell Count, normal; Globulin, normal or inc.; Wasserman, positive; Colloidal Gold, indeterminate or syphilitic zone type.

Group III Cell Count, 30 or more; Globulin, inc.; Wasserman, 4 plus; Colloidal Gold, negative or syphilitic zone type.

Group IV Cell Count, above normal; Globulin, marked inc.; Wasserman, 4 plus; Colloidal Gold, paretic type.

## SPONTANEOUS SUBCUTANEOUS EMPHYEMA OCCURRING DURING LABOR

MATTHEW COHEN, M. D.

*Phoenix, Arizona*

A 19-year-old primigravida, went into labor on May 15, 1942 at about 6 p.m. and progressed slowly but satisfactorily until about 1 p.m. May 16, 1942 or 19 hours later when dilatation of the cervix was complete. The waters ruptured about 1:30 p.m. or 30 minutes later. I was

minutes when no apparent results were forthcoming. Finally to my great relief the patient delivered a 9-pound normal baby. The third stage was normal. Curiously enough there was no perineal tear.

Following the delivery I re-examined the patient and the following was found. Blood pressure 130/80. Pulse 110, which rapidly lowered to 85. Respirations were 15-20 a minute. Breath sounds were normal. There was extreme swelling of all the soft tissues of the face, neck and upper chest. There was plainly visible audible and tactile crepitus over the entire area described. Examination of the mouth and throat revealed no mucous membrane tears. The patient complained of no pain except that she stated she felt swollen. She also complained of difficulty in swallowing.

In questioning the patient about her past history she stated that except for the usual exanthemata of childhood she had never been sick a day in her life.

The family history was irrelevant except that her mother died of pulmonary tuberculosis.

Treatment consisted of elevation of the head of the bed which gave her quite a bit of relief, and hypnotics.

A review of the literature on this condition, which is not described in standard textbooks, reveals that it is an unusual and interesting complication of labor. The first case was reported in 1783.

Gordon in 1927 reviewed 130 cases from 1783. Since 1927 only one case has been reported in the literature and this will make the second.

Gordon states that the condition should be called respiratory emphysema to distinguish it from subcutaneous emphysema that would arise from gas forming bacteria in the birth canal.

The etiology of this condition is obscure. It usually occurs in primipara, with somewhat prolonged labor. Very few of the cases have predisposing pulmonary pathology as it occurs most commonly in young robust women. Dysuria is common and most cases have a long



in attendance on her for the last 3 hours of her labor. Her appearance was normal when I first saw her. Her pains for the last 2 hours were about every 2 minutes and were strong although they lasted only 20-30 seconds. As was customary, since she seemed to be making slow progress, I instructed her to take a deep breath, hold it, and push down. In spite of good cooperation she made very slow progress. At this time a vaginal examination revealed that the head was on the perineum and was in the occiput posterior position. One capsule of secodal had been given for pain and was producing a very satisfactory analgesia.

Between her pains I observed that her face appeared puffy. I thought that she was developing some edema of the face. The blood pressure was taken and found to be 120/80. Pulse was 120 but of good quality. I forgot about it momentarily but soon it was very prominent. Three minims of pituitary was given hypodermically as I was anxious to terminate labor. This was repeated in about 10

labor. It may occur in the first stage but usually occurs in the second stage. Occasionally it is not discovered until the third stage.

Out of 130 cases only two died which indicated that the mortality is very low.

Faust tried to reproduce the effect 5 days after it occurred by having the patient blow into a rubber bag connected by a long hose. The patient tired out without showing any additional air in the tissues.

That is about all the clinical research that has been done on this interesting condition.

Gordon in trying to explain the mechanism thinks "that during deep inspiration accompanying labor pains a large volume of air is stored in the lungs; the chest is fixed and the thoracic cavity narrowed. The force will act then entirely on the contained organs and the parenchyma, which normally meets no resistance, will give away."

If the force continues to act the air passes under the pleura to the root of the lung, opening an easy path through the sheaths of the great vessels, infiltrating the mediastinum and following the vessels of the trachea into the neck, from where, with but little resistance, it finds its way through the cellular tissues. Pneumothorax has not been observed in any case."

#### Conclusions:

1. An additional case of respiratory emphysema is presented.
2. Etiology and pathology is still obscure.
3. Prognosis is generally good.
4. Treatment is expectant.

15 East Monroe.

## DOCTOR!

IF YOU HAVE NOT REPLIED TO THE LETTER FROM THE COMMITTEE ON MEDICAL ECONOMICS GIVING THEM YOUR OPINION ON A MEDICAL SERVICE PLAN FOR ARIZONA, DO SO AT ONCE AS THE COMMITTEE WISHES TO MAKE A FULL REPORT TO THE HOUSE ON APRIL 28.

PLEASE RESPOND AT ONCE.

Committee

## Cancer Section

### APRIL—CANCER CONTROL MONTH

E. PAYNE PALMER

*Phoenix, Arizona*

Cancer ranks second as the cause of death in Arizona and in the United States. One hundred and sixty-five thousand (165,000) death certificates annually give cancer as the cause of death. Approximately five hundred thousand (500,000) persons have cancer in the United States and Arizona has its full proportion. Roughly, one out of every six of you who read this will die of cancer—unless you do something about it. Precious little is being done. The truth is, the doctors and the laity do not support the drive to stamp out cancer.

Cancer is the greatest killer of women and the second greatest killer of men. Yet, the American Cancer Society received less than a half million dollars last year for education and research against a disease that kills so many men, women and children annually. Last year alone, the National Foundation for Infantile Paralysis raised almost eleven million dollars (\$11,000,000) to fight a disease that attacked only 12,429 persons last year and killed not over 1100. This organization is carrying on a splendid program and is entitled to all the support that can be given it.

This year there will be approximately two hundred thousand members of the Woman's Field Army working throughout the United States to make April—Cancer Control Month—an outstanding achievement. Mrs. Thomas A. Hartgraves is Commander of the Arizona Field Army. She has a splendid state wide organization which is prepared to carry on an active cancer control program during April. The Woman's Auxiliary of the Arizona State Medical Association is sponsoring the campaign and giving valuable assistance. The American Cancer Society, Arizona Division, was recently incorporated and the organization perfected. Ample funds are in the bank to finance our program.

Therefore, it is the duty of each member of the Arizona State Medical Association to come to the aid of these earnest workers and help make the cancer control program in Arizona an outstanding event, one long to be remembered.



their own contributions without government help. Second, government at all levels, employers, the great mass of potential patients, and, above all, the medical profession must show a degree of social inventiveness and a determination hitherto unknown.

"If either of these conditions is absent, the U. S. is probably headed through a spotty and unsatisfactory experience with voluntary medical insurance toward compulsory nationwide insurance. Dr. Alan Gregg of the Rockefeller Foundation thinks that medicine may be in the state that education was in a hundred years ago—moving from a private to a public sphere. The analogy is too close for the comfort of those who want guarantees that medicine will not fall under the control of public servants, those who prefer voluntary methods, dispersed controls, and many minor forms of collectivism to one big collective step. The responsibility of the doctors takes the form of a dilemma that they must face; if they do not themselves aggressively foster and encourage considerable reform in medical economics, they are likely to find themselves swept into something that will seem revolutionary by comparison. By one means or another, medical security is undoubtedly coming. The consumers are making a social issue of it and it will, before too long, be met socially."

Separate Public Opinion Polls have been conducted by the National Physicians Committee, the State of California, and the State of Michigan. Roughly speaking and averaging their conclusions: about 35% of the people are against Federalized Medicine, and about the same number think that something should be done to render the payment of medical bills—especially so-called catastrophic illness—easier. About 35% are in favor of government paid medicine, and about 30% are undecided.

#### WHAT SOME OF THE STATES ARE DOING

Michigan is the outstanding example of a Medical Service Plan which they claim is working successfully. They are rapidly enlarging the groups of subscribers which have been the main criticism of our prepaid, voluntary, non-profit Service Plans, i. e. that they reached only a small percentage of the population. They have also won this support and cooperation of most of the Medical Profession, many of whom feared it, and despaired of its success. They also found in their own Public Opinion Poll

that only 25% of the population knew that there was such an organization in existence.

California Medical Service is the second largest plan in operation and is the next one after Michigan that is pointed to with success. It was organized in 1939. It was slow for the first four years, enrolling about 1000 subscribers a month. But in the final four months of 1944, it added 12,000 a month. It now has an enrollment of 125,000.

But in spite of the aggressiveness of the California Medical Society, they have their own little Murray-Wagner-Dingall Bill. In December, Governor Warren called members of the State Medical Society together and told them that California needed a Compulsory Health Insurance Law, and in his address to the State Legislature in January he demanded such a law, and submitted his plan. The plan calls for compulsory contribution from both wage earners and employers of 1½% each. It promises free choice of physicians.

The State council of the Medical Society met in extraordinary sessions and drew resolutions violently opposing such legislation at this time. Incidentally it has been shown that where free Medical care is offered, the demand for care has been increased from 2 to 4½ fold. Visualize what would happen at a time like this when every Doctor is working beyond his limit, and to have this demand for care just double.

Iowa has a plan in the process of organization. It differs from the Michigan Plan in that it offers Medical as well as Surgical and Obstetrical Service, while in the hospital. An interesting item about the Iowa plan is that it is being underwritten by the Bankers Life Insurance of Des Moines, which is one of the strongest Old Line Insurance Companies in this nation.

The Medical Profession of the Metropolitan area of New York City have announced the inauguration of a full scale voluntary medical insurance program, to be known as United Medical Service. It states that its policy is designed to supplement and enhance the hospital insurance plan of the Associated Hospital Service of New York. It is being introduced as "The Doctor's Plan". Negotiations are proceeding also with the "Health Insurance Plan of Greater New York" sponsored by Mayor La Guardia.

The prospect of developing a sound basis active participation by organized medicine is reported to be good.

#### COMMENT

The above remarks merely touch the high spots of the activities in voluntary, prepaid, non-profit health insurance. The first problems for our State Society to determine is whether the field is large enough in Arizona to launch a Medical Service Program. And if the answer is found to be in the affirmative, we should proceed. But it is to be remembered that it will no doubt be the largest single undertaking this State Society has ever attempted, that it will require the full cooperation of every member, and that it is a job the doctors will have to do themselves.

and approval of the Council, an instructive and especially interesting program, with a group of instructors from Baylor University as guest speakers. The papers were to have been largely on war-borne diseases. It is regretted that the exigencies of war required the cancellation of this important scientific assembly.

Dr. Austin received his medical education at Loyola University, Chicago, graduating in 1912. In 1911 he married Miss Myrtle Brown of Canada. There are two grown children—a son and a daughter, the son now serving the armed forces. Dr. Austin served as a medical officer for two years during World War I.

Prior to coming to Arizona in 1919, Dr. Austin practiced in Little Rock, Arkansas and El Paso, Texas. He has been located in industrial practice in Arizona since coming here. He holds membership with the American Medical Association and the American Association of Industrial Physicians and Surgeons.

In the Arizona Medical Association, Dr. Austin has been most active. He has served on the Committees on Industrial Health and Industrial Relations. He was a member of the Medical Advisory Board under the Workmen's Compensation Act and is at present a member of the Board of Silicosis under the Occupational Disease Act. He served on the Council as Councilor for the Southern District before being elevated to the high office of President-Elect. He has been most faithful in the discharge of these various duties.

With his diligence to duty and his insight and interest in association activities, Dr. Austin will serve with credit to himself and the Association in the high office of President for the coming year.



**Charles Paul Austin, M. D.  
PRESIDENT-ELECT**

Dr. Charles Paul Austin, President-elect of our Association, is at present chief surgeon for the Phelps Dodge Copper Company at Morenci, Arizona. Dr. Austin will take his place as President when the Council and House convene this April. The scientific sessions have been cancelled at the request of the Office of Defense Transportation as you will note in other pages of this issue of the Journal. As chairman of the Committee on Scientific Assembly, Dr. Austin had arranged, with the aid of his committee

#### Vocational Training Rehabilitates Disabled

More than 75,000 men and women who were unable to hold a job because of some crippling disability have gone on the 1944 payrolls as a result of assistance given them under the Federal-State program for vocational training, Federal Security Administrator Paul V. McNutt announced on October 29. This total, much larger than that for any previous year, comes, he said, from a tabulation of reports made by

the State boards of vocational education to the Office of Vocational Rehabilitation of the Federal Security Agency.

Emphasizing the economic importance of the rehabilitation program, Mr. McNutt cited the results obtained by the District of Columbia Rehabilitation Service during the fiscal year 1943-1944. A summary of its report accounts for the rehabilitation of 435 handicapped persons. Of this number 161 were placed in government jobs and 274 in jobs in industries essential to the civilian economy.

The annual earnings of the 435 persons rehabilitated, it was pointed out, will amount to \$714,636 the first year after their rehabilitation. The average weekly wage was raised from \$28.65 in the fiscal year 1942-1943 to \$31.59 in 1944.

Of all the rehabilitated cases, 76, or 17.5 per cent were referred by the District of Columbia Board of Public Welfare. The annual earnings of this group alone will amount to at least \$103,320. If these persons had not been restored to remunerative employment, Mr. McNutt said, it would have cost the Board of Public Welfare \$25,016 as an annual recurring expense, while the cost of rehabilitation amounted to only \$3,592.—Release from the Office of War Information, Oct. 29, 1944.

## Hospital Survey Opens Fight On Tuberculosis

Causing over half as many deaths since Pearl Harbor as the war itself, tuberculosis has become one of the world's greatest murderers.

That the hospitals of America may facilitate the eradication of human tuberculosis, 6500 of them this week began participation in a survey inaugurated by the American Hospital Association to determine the number of institutions now examining their patients and personnel as a part of the regular admission routine.

"Of every 100,000 people in the United States in 1943, forty-four died of tuberculosis," stated Hugo V. Hullerman, M. D., secretary of the Association's Council on Professional Practice which is making the survey. "Thousands of men and women never realized they had the disease until it had reached its incurable stages.

"Programs of routine examination have been found to discover 70 to 75 per cent of the cases

in their minimal or primary stages. Without these precautions, as many as 90 per cent might go undiscovered. Hospitals in 1943 admitted over 27 million patients," he continued, "and since one person in ten makes use of his hospital at some time during a year, a nationwide program of hospital examination would reach most of the country's population in a few years, including many who would not be included in employee surveys."

Results of the American Hospital Association survey will be used as a guide to hospitals and to state hospital associations in their future efforts, and as a measure of future programs for the continued improvement of the health care of the people in stamping out the disease which is striking yearly such a large percentage of the population.



**John W. Flinn**

(1870 - 1944)

In the death of Dr. John W. Flinn, of Prescott, on November 21, 1944, another of the rapidly dwindling group of pioneer medical men of Arizona passed to his reward. During his more than forty years as director of the nationally known Pamsetgaaf Sanatorium, by his wisdom, uprightness and forcible personality, Dr. Flinn carved for himself an enduring place

in the medical history of this state, through his activities in the Yavapai County Medical Society, and through his persistent research and keen clinical judgment, he made a lasting impression on the medical thought and achievements of his generation.

John William Flinn was born on July 10, 1870, in the town of Wallace, province of Nova Scotia, Canada. He was the youngest of six children born to Thomas Flinn and Annie Cameron. On his father's side he was descended from Manxmen, his grandfather having come to Canada from the Isle of Man. All of his mother's people had come to Canada from Scotland.

At the age of fourteen, John Flinn was sent to Pictou Academy, in Pictou, Nova Scotia, where his high school course was completed. He received his medical degree from McGill University in 1895, following which Dr. Flinn returned to his home town and engaged in general practice until 1898, when he was forced to change climate because of a chronic pulmonary tuberculosis from which he had suffered for some years. He came to Arizona and located in Kingman in September, 1898, where he engaged in general practice until 1902, in which year he moved to Prescott. Shortly after his arrival in Prescott, he became ill with tuberculous pneumonia which kept him bed fast for six months or more. Following recovery from this illness, he recognized that his physical condition would not permit him to engage in a general practice; being encouraged by an eastern physician who had a patient requiring sanatorium care, Dr. Flinn, in 1903, established "Pamsetgaaf Sanatorium" in the pines west of the town of Prescott. Having been impressed by Osler's dictum regarding tuberculosis, that one should have "pure air, maximum sunshine, equable temperature", he took the first letters of these words and added "good accommodation and food", creating the name "Pamsetgaaf." This sanatorium was the pioneer institution of its sort west of Mississippi, and here Dr. Flinn carried on his clinical and research work in tuberculosis during the next forty years, continuing as its medical director to the time of his death.

During this four decades of fruitful research and treatment of tuberculosis, Dr. Flinn saw many changes in the concepts regarding the

disease, several of which he was instrumental in bringing about. He was not a prolific writer, but was a constant reader and keen observer of the work of others, a severe critic of his own practice and results of which he kept a detailed record and, from time to time, he presented carefully prepared papers, which were always eagerly received and listened to with respect by his confreres at home and abroad. There is appended below a list of the most important contributions of Dr. Flinn and his associates to the medical literature of his day.

From observation of his own case and from study of other patients, Dr. Flinn early in his practice became impressed with the value of rest in the treatment of tuberculosis. Although Hilton (in 1860) had emphasized the value of rest in acute and chronic inflammation and Wier Mitchell (1874) had developed his rest treatment for neurasthenia and hysteria, the American medical literature at the beginning of the twentieth century contained practically no reference to the value of rest in the treatment of pulmonary tuberculosis. In June, 1913, at the Annual Session of the American Medical Association, in Minneapolis, Dr. Flinn presented a paper on "Rest and Repair in Pulmonary Tuberculosis."<sup>5</sup> In this paper he recommended that "a person should be confined absolutely in bed for at least a month and in the great majority of cases for two months, and this regardless of whether there is fever or not." This comparatively mild statement, in the light of present day practice, was regarded as a very revolutionary idea and it is interesting that Dr. Richard Cabot of Boston, among others, in discussing the paper, took a somewhat skeptical viewpoint with regard to such radical treatment. Dr. Flinn had pointed out in his summary that "although much good has been done in the last ten years on the influence of serums, vaccines and other special treatments in pulmonary tuberculosis, so much has been written along these lines that the profession is apt to forget that fresh air, good food and rest are still the sine qua non of the treatment of the disease."

Throughout his medical life, Dr. Flinn insisted on what he called the rational treatment of tuberculosis, and was not swayed from this by the vogue for tuberculin or any other specific types of treatment. In September of 1914, he read a paper before the Missouri Valley Med-

ical Society on the rational treatment of tuberculosis, this being published in the Interstate Medical Journal, under the title, "Climate and Its Relative Importance in the Treatment of Pulmonary Tuberculosis." Although he agreed with Barlow and other authorities of the day that climate played an important role in the treatment of tuberculosis, he insisted that "if the patient must choose between climate and good care, he should take the good care and let the climate go."

In his advocacy of so-called postural rest in the treatment of lung tuberculosis, he did not neglect other methods of securing rest. He was one of the early users of pneumothorax and in his seventy-fifth year was still employing this method. He was a strong advocate of surgical procedures in the treatment of tuberculosis in selected cases and many years ago, before there were any chest surgeons in the state, he arranged for Dr. Leo Eleosser to come to Prescott and perform a thoracoplasty.

In addition to his work in pulmonary tuberculosis, Dr. Flinn had extensive experience in tuberculosis of the bones and joints. Early in his career he came under the influence of Rollier and was one of the first in the West to use heliotherapy in a systematic and scientific manner.<sup>20</sup>

Because of his own pulmonary condition, Dr. Flinn was forced to spend each afternoon at bed-rest, and he became a great student of the literature on tuberculosis and other lung diseases. He became interested in the work of Cunningham and Sabin in the significance of the differential blood count. He installed x-ray and clinical laboratories at Pamsetgaaf Sanatorium long before such refinements in medical practice became generally popular. With the help of competent technicians and later in collaboration with his two sons, he carried out extensive research in differential blood counts, serology and blood chemistry, x-ray findings, and correlated these with his careful clinical observations. This work is reflected in several notable papers read before the National Tuberculosis Association, the Medical & Surgical Association of the Southwest, and other societies.<sup>12, 13, 16, 19, 23</sup>

Dr. Flinn's work on moniliasis of the respiratory tract is a fascinating story of adventure into little known medical paths, calling for keen

clinical insight and judgment, persistent research, and a final masterful summary of data accumulated by observations extending over several years. This work must have brought him the greatest pleasure of his life, because in it he had the active collaboration of his two physician sons.<sup>21, 22, 24</sup>

Throughout his whole medical life, in spite of physical handicaps, Dr. Flinn gave generously of his time and strength to organized medicine. One of the "famous fighting four" of Yavapai County, he was always in the forefront of any constructive activity of his own county medical society or the state organization. He was made secretary of the Arizona State Medical Association in 1908 and served through 1911, when he was forced to relinquish this office because of physical limitations. Urged to accept the office of president, he did not feel able to undertake the obligations of that office until 1914, when he was unanimously elected to this highest honor in the Association. His interest in the welfare of the Association never waned during the succeeding thirty years. A perennial delegate from Yavapai County Medical Society, his counsel was sought on all important questions up to the very time of his death. His last official service to the Association was as a member of the important Subcommittee on Silicosis, out of whose work came the Arizona Industrial Disease Law. His last medical paper was his report on "The History and Causes of Silicosis", this being a report of his assignment on this committee.<sup>26</sup>

Dr. John Flinn was married to Margaret Mackay at Wallace, Nova Scotia, on March 14th 1894. She accompanied him to Arizona and throughout the years of his illness and the lean years of creating and building a sanatorium she was his constant companion, nurse and helpmate. To them were born three sons and two daughters. Dr. Zebud M. Flinn died in 1940. Dr. Robert S. Flinn, Mrs. S. W. Ensminger, Capt. John S. Flinn, Mary Flinn and his widow survive to mourn the passing of husband and father.

Dr. John Flinn—a brave warrior, a good friend, a useful citizen, a worthy and respected confrere—we who remain glory in your achievements and will ever cherish your memory.

W. W. W.

PARTIAL LIST OF MEDICAL ARTICLES  
BY DR. JOHN W. FLINN

1. Chronic nephritis and its associated lesions. *Sou. Calif. Pract.*, March, 1909 (with H. T. Southworth).
2. Immunity and serotherapy in tuberculosis. (Read at Ariz. State Assn. Meeting, May 19-20, 1909.)
3. Preventive Medicine in the southwest; its aims and limitations. *New Mex. Med. Jour.*, Feb., 1911.
4. Medical profession in its relation to the tuberculosis problem. *New Mex. Med. Jour.*, Nov., 1912.
5. Rest and repair in pulmonary tuberculosis. *Jour. A. M. A.*, Apr. 16, 1913.
6. Vital Statistics in Arizona. *Ariz. Med. Jour.*, Jan., 1915.
7. Climate and its relative importance in the treatment of pulmonary tuberculosis. *Interstate Med. Jour.*, 1914 or 1915.
8. Influence of climate as distinguished from fresh air in treatment of pulmonary tuberculosis and its complications. *Amer. Rev. Tuberc.*, June, 1920.
9. Medical technic and its practical application in examination of lungs. *Trans. Sect. Pract. of Med.*, A. M. A., 1922.
10. Artificial pneumothorax in treatment of pulmonary tuberculosis. *Southwest Med.*, Jan., 1923. (with W. E. McWhirt and J. H. Allen.)
11. Allergy and immunity in tuberculous infection. *Southwest Med.*, Apr., 1926.
12. Study of differential blood count in 1,000 cases of active tuberculosis. *Ann. Int. Med.*, Jan., 1929.
13. Leucocytic picture of blood as aid in prognosis and treatment of pulmonary tuberculosis. *Am. Rev. Tuberc.*, Sept., 1929. (with R. S. Flinn.)
14. Prevention of tuberculosis. *Southwest Med.*, Nov., 1929.
15. Pneumoconiosis. *Southwest Med.*, July, 1930. (with R. S. Flinn.)
16. Differential blood count as index of underlying pathological processes in tuberculosis. *Nat. Tuberc. Assn. Trans.*, 1930.
17. Specific Treatment of Pulmonary Tuberculosis. *Southwest Med.*, July, 1931.
18. Correlation of blood counts in 150 clinical cases of tuberculosis and underlying pathological changes as shown by serial x-ray films. *Am. Rev. Tuberc.*, May, 1933. (with R. S. and Z. M. Flinn.)
19. Tissue reactions to tubercle bacillus. *Southwest Med.*, Jan., 1933. (with Z. M. Flinn.)
20. Treatment of bone and joint tuberculosis. *Southwest Med.*, July, 1933. (with R. S. and Z. M. Flinn.)
21. Bronchomoniiliasis (preliminary report). *Southwest Med.*, June, 1935. (with R. S. and Z. M. Flinn.)
22. Study of nine cases of bronchomoniiliasis. *Ann. Int. Med.*, June, 1935. (with R. S. and Z. M. Flinn.)
23. Calcium metabolism and its role in healing of diseased and injured tissues. *Southwest Med.*, Sept., 1935.
24. Bronchomoniiliasis. *J. Trop. Med.*, Oct. 15, 1937. (with R. S. Flinn.)
25. Selective extrafascial pneumothorax; preliminary study. *Southwest Med.*, June, 1938. (with J. H. Allen.)
26. The history and causes of silicosis. *Ariz. Med.*, May-June, 1944.

EVOLUTION OF MICHIGAN MEDICAL SERVICE

JAY C. KETCHUM  
*Detroit, Michigan*

It is perfectly natural for the doctors of any state or locality to be subject to initial doubts and misgivings when they confront the launching of a prepayment program for medical care, but it now can be said that most of these apprehensions are groundless.

Medical service plans will work. They will work to the eminent satisfaction of profession and public alike. If there is any one set of facts that has been established during the last five years, it is that a professionally-sponsored program of this type is wholly practical, is equally beneficial to doctors and patients and is eagerly accepted by the public.

I make these statements on the basis of the experience of the Michigan Medical Service, which is here set forth as the case history of an enterprise conceived in uncertainty and subjected to more than its share of growing pains, but now arrived at a lusty and promising young maturity.

Today Michigan Medical Service has accumulated experience which we sincerely hope will assist other state and county medical societies in embarking upon similar projects with the certainty of sound and orderly development. Michigan Medical Service has enrolled 693,170 subscribers, or one out of every eight persons throughout the state. It has paid some \$8,665,000 for services rendered in 235,000 cases. It is continuing to grow with great rapidity.

It has, in other words, achieved in four and a half years a position that would be considered a resounding success in the business world. But it was not always so. The doctors of Michigan doubted, first, that the people wanted such a program. They wondered if it wouldn't bring in socialized medicine by the back door. They felt, some of them, that medicine should not concern itself with purely economic questions. They seriously questioned the advisability of a program developed on a service rather than a cash indemnity basis. They were puzzled by the problem of relationships with hospital service plans.

They didn't know, further, what income limits to establish in their plan, or how to ascertain subscriber eligibility, or whether to enforce the limits. They debated the question of complete versus limited coverage. And when it came to determining both charges to subscribers and fees to physicians they necessarily invaded an untrammeled wilderness.

The wonder is that out of this immense perplexity there came anything tangible at all. It is an even greater wonder that the Michigan program managed to survive its beginning years.

In March of 1940, nonetheless, there was introduced the prepayment medical care plan known as

"Michigan Medical Service"—a non-profit organization directly sponsored by the Michigan State Medical Society. Standard principles of group insurance were utilized in the program, which proposed to enroll subscribers in groups, each subscriber contributing a certain monthly payment and receiving in return the services of the doctor whenever needed.

The original proposition was to make the new project a "service" rather than a cash indemnity affair. By that it was meant that the subscriber would simply show his membership card to the participating doctor, who had agreed in advance to furnish his services without any direct charge to the subscriber. The physician received a standard fee for each type of service directly from the Michigan Medical Service.

Obviously, the plan was slanted to low-income groups. The income limits for subscribers were established at an annual average of \$2,000 for unmarried persons and \$2,500 for the enrolled family. Michigan Medical payments to physicians were based on what was felt to be a fair charge for services to this income class.

But once the Michigan Medical Service sales or "enrollment" representatives entered the field, it was found that the income limits could not be made to stick. The married man who earned \$2,600 resented the fact that he could not join the plan. Employers who were asked to cooperate by making payroll deductions likewise balked, insisting that they had no interest in a program which was not equally available to all their employees.

One of the first major compromises thus resulted early in the history of Michigan Medical Service. It was decided to retain the "full service" provision for employees within the established income limits, but also to permit higher income employees to enroll with the understanding that the participating doctor retained the right to make a charge to the subscriber in addition to the fee he received from Michigan Medical Service. This policy has been continued to the present, with reasonably satisfactory results.

Meanwhile, Michigan Medical Service quickly found that it has been overly ambitious in endeavoring to provide complete coverage of all the physician's services in the home, his office, or the hospital. For this complete program a schedule of monthly charges to subscribers had been established at \$2.00 for the single subscriber, \$3.50 for the husband and wife, and \$4.50 for the full family.

These rates were reached by doubling the average use of the doctor's services and adding a charge for overhead—but they were scarcely half high enough. During the twenty-seven months that the complete medical program was in operation, the monthly income per subscriber averaged \$2.61, or a loss of \$1.23 per subscriber per month.

Moreover, the public wasn't ready to pay even these "half-cost" charges. The highest enrollment

in the complete plan was 7,375 subscribers, the average slightly less than 4,000.

Side by side with the complete medical program, however, Michigan Medical Service has been offering limited protection providing only for surgery to subscribers who became bed patients in the hospital. Logic supports this limited protection as the type which would be most urgently desired by the public, since it provides for catastrophic health situations—the surgical cases which most commonly run to heavy expense.

During the same twenty-seven months that the complete medical program reached a maximum of 7,375 subscribers, the surgical plan enrolled more than 350,000 subscribers. But again, rates which had been set too low resulted in financial difficulties. The initial monthly charges for the surgical plan were 40 cents, \$1.20 and \$2.00. Instead of the average of forty operations per thousand persons per year which prevailed for the entire population, the average at one time rose as high as 160 operations per thousand Michigan Medical Service subscribers annually.

For two years and more Michigan Medical Service struggled with a financial situation which threatened its collapse almost at any moment. It took another two years, and two increases in subscriber charges, to achieve the excellent financial position which prevails today.

With the complete medical plan no longer in operation, charges to subscribers for the surgical program now are 60 cents, \$1.60 and \$2.25 per month. A sliding scale increases the charge up to 90 cents monthly for subscribers in groups having a high percentage of female employees. Moreover, Michigan Medical Service insists on enrollment of 75 per cent of the employees of any company, thus insuring a representative group which is unlikely to have a disproportionate share of sickly members in need of surgery.

With the proper sales techniques, there is little difficulty in obtaining this percentage. Actually, it has been necessary to restrain the growth of Michigan Medical Service so that the usual high incidence of surgery in new "unseasoned" groups could be comfortably assimilated. One point which the plan has demonstrated beyond question is that there is public demand for a program of this sort.

Most doctors probably are already familiar with the national polls showing a heavy majority of the population in favor of a federal health insurance program. Proposals such as the Wagner-Murray-Dingell Bill clearly stem from this public demand. Equally clear is the point that some such proposal will inevitably be enacted into law unless the public demand is met in some other way.

That "some other way" has been found in Michigan, according to a factual objective survey just completed by the Michigan Health Council. Whereas the "Fortune" Poll of 1942 showed 75 per cent of the people nationally favoring federal health insurance, and the Gallup Poll of last year showed

nearly 60 per cent similarly disposed, the Michigan Health Council survey demonstrated that only 39 per cent of the Michigan population wants "some sort of a government-operated, medical-hospital plan."

The obvious conclusion to be drawn from Michigan's variation from the national sentiment is that the people prefer to have the doctors rather than the government sponsor a prepayment program. This conclusion was further supported in the Michigan study when, after having been asked bluntly and without option whether or not they wanted a federal program, the people were asked what sort of a plan they would prefer if they had a choice.

Given five possible methods of payment for medical service, the Michigan population voted overwhelmingly in favor of a voluntary, professional plan drew a 33.5 per cent vote, against a mere 11.5 per cent for a government plan. Regular insurance received a 13.4 per cent vote, a union plan a .9 per cent vote, and payment for illness as it arises a 26.16 per cent vote.

This is the answer to the question as to whether doctors should concern themselves with medical economics. They should if they wish to meet the plainly-delineated desires of the public. They must if there is not to be compulsory federal medicine.

I believe that the not uncommon feeling that such a plan as Michigan Medical Service provides back-door entry to "socialized medicine" is dissipated by a little thought about the nature of the plan. All the plan does is to enroll members, collect their payments, and pay the physicians.

It does nothing to interfere with the doctor-patient relationship. It exercises no control over doctors, for even the doctor's participating agreement is a contract with the subscribers rather than with the plan itself. Nor does Michigan Medical Service have anything to do with setting the fees paid for medical services. These fees are determined by committees of the doctors themselves. Finally, the plan is under the doctor's control in any event, for it is their own program and is operated as they want it to be operated.

From the start it was the feeling of the medical men who led in the establishment of Michigan Medical Service that the program would be as beneficial to the profession as to the public. Four and a half years' of operation have borne out this belief. For that portion of his fees which is the obligation of the plan, the doctor has no uncollectible or uncollectable items. On the average, he is paid within two weeks after his statement reaches the plan. He need not delay needed surgery for plan subscribers because they are hard-pressed for money. Even if he is a general practitioner rather than a surgeon, he usually shares in the plan's payments. Sixty-five per cent of the money paid out by Michigan Medical Service, which at present is exclusively a surgical program goes to the general practitioners of the state.

So far as the public of Michigan is concerned, the surgical care plan of Michigan Medical Service and the Blue Cross hospital care plan of the Michigan Hospital Service are "one package." Internally, Michigan Medical Service and Michigan Hospital Service are separate corporations, dealing with their respective professions. But the subscriber is enrolled in both programs simultaneously; he makes a single payment which is then apportioned between the two plans; he has a single membership card which he shows to both the doctor and the hospital when he needs service.

It is almost mandatory to present this unified front to the public if the plans are to succeed. Neither employers nor employees will be bothered with signing and paying for two separate services in what they consider to be the same field. It is equally desirable from the plan economy standpoint to eliminate excessive duplication by maintaining a joint record system.

It is one of the fine traditions of medicine to examine every new technique or procedure microscopically, to begin by "tearing it apart" in search of flaws. In medicine, imperfections are likely to result in widespread catastrophe. Michigan Medical Service has been subjected as fully as any new medical technique to this type of critical searching analysis on the part of medical men throughout the state. But medical tradition also embraces the most rapid utilization of new procedures once they have been proved. It is naturally our feeling that the prepayment procedure utilized by Michigan Medical Service and its companion medical service plans now has been proved beyond any reasonable doubt.

Reprinted from the Journal of the Indiana State Medical Association, November, 1944.

## TREATMENT OF SCARLET FEVER

MAX J. FOX and NORVAN F. GORDAN  
Milwaukee, Wisconsin

Arch. Int. Med., 74:1-3, July, 1944

Scarlet fever is now treated in three ways: chemotherapy with the sulfa drugs, with commercial antitoxin, and with convalescent serum, of which the last gives the best results. Cases of scarlet fever, in one hospital from 1937 to 1943, of 7,500 patients, were studied. Human convalescent serum had been administered to 1,000 of these patients. A group of 1,000 other cases seen before 1923, when none of these three treatments was available, was used as a control series. The 1,000 patients of the latter group as a whole were more seriously ill than the control group, for all of them had to be treated with convalescent serum.

In the serum-treated group, pyrexia lasted for an average of two and one-half days, but in the control group the average had been five and five-tenths days. The disease itself had an average duration of twenty-four and five-tenths days in the serum-treated patients and, in the control

series, forty-three and five-tenths days. There were 17 deaths in the former and 20 in the latter. Only 8.8 per cent failed to respond to serum therapy, and 83 per cent showed rapid improvement in sore throat and rash; 8.2 per cent improved after a second administration of serum.

During the six years that convalescent serum was given, the dosage was materially lessened. Small doses were as effective as larger ones, especially if given early. Sulfonamides are ineffective in treatment of scarlet fever but valuable in treat-

ing complications, as shown in an earlier study. Likewise, commercial antitoxin may be used to overcome toxic effects of scarlet fever but is not advised because foreign protein reactions may result. The conclusions drawn are that administration of pooled human convalescent serum shortens the duration of pyrexia, lessens complications and decreases the death rate.

(Reprinted from the Quarterly Review of Medicine, Nov. 1944.)

## ORGANIZATION SECTION

DAN L. MAHONEY, M. D., President

### Directory

#### ARIZONA STATE MEDICAL ASSOCIATION Organized 1892

423 HEARD BUILDING, PHOENIX, ARIZONA

##### OFFICERS AND COUNCIL

|   |          |
|---|----------|
| Dan L. Mahoney, M. D. (1948)                                    | Tucson   |
| President   |          |
| Charles P. Austin, M. D. (1949)                                 | Morenci  |
| President-Elect   |          |
| Walter Brazie, M. D. (1945)                                     | Kingman  |
| Vice-President  |          |
| Frank J. Milloy, M. D. (1945)                                   | Phoenix  |
| Secretary   |          |
| C. E. Yount, M. D. (1945)                                       | Prescott |
| Treasurer   |          |
| P. W. Butler, M. D. (1945)                                      | Safford  |
| Speaker of the House  |          |
| Jesse D. Hamer, M. D. (1946)                                    | Phoenix  |
| Delegate to A.M.A.  |          |
| D. F. Harbridge, M. D. (1945)                                   | Phoenix  |
| Chairman, Medical Defense                                       |          |
| District Councilors   |          |
| Robert S. Flinn, M. D. (1947)                                   | Phoenix  |
| Central District (Gila, Maricopa, Pinal, Yuma)                  |          |
| George O. Bassett, M. D. (1946)                                 | Prescott |
| Northern District (Apache, Coconino, Mohave, Navajo, Yavapai)   |          |
| J. Newton Stratton, M. D. (1948)                                | Safford  |
| Southern District (Cochise, Greenlee, Graham, Pima, Santa Cruz) |          |
| Councilors-at-Large   |          |
| E. Payne Palmer, M. D. (1946)                                   | Phoenix  |
| Hal W. Rice, M. D. (1945)*                                      | Bisbee   |
| O. E. Utzinger, M. D. (1947)                                    | Ray      |

\*Serving unexpired term of W. Paul Holbrook in Service.

##### COMMITTEES

###### Scientific

|   |
|---|
| Cancer Control—A. L. Lindberg (1947), Tucson; E. Payne Palmer (1945), Phoenix; M. G. Wright (1945), Winslow, and J. N. Stratton (1946), Safford.  |
| History and Obituaries—Hal W. Rice, Historian, Bisbee; Donald F. Hill, Tucson, Frank J. Milloy, Phoenix.  |
| Industrial Health—John D. Hamer (1947), Tiger; Chas. B. Huestis (1946), Hayden; R. W. Hayden (1945), Tucson.  |
| Maternal and Child Health—L. C. McVay (1947), Phoenix; Howard C. James (1945), Tucson; W. P. Sherrill (1946), Phoenix.  |
| Orthopedics—Geo. L. Dixon (1947), Tucson; E. W. Adamson (1946), Douglas; James Lytton-Smith (1945), Phoenix.  |
| Scientific Assembly—Charles P. Austin, President-elect and Chairman (1945); Morenci; Carl H. Gann (1947), Bisbee; G. F. Manning (1946), Flagstaff; R. W. Rudolph, Host Society (1945), Tucson; Frank J. Milloy (1945), Phoenix. |
| Scientific Education and Postgraduate Activities—A. H. Dysterhoff (1946), McNary; A. I. Podolsky (1947), Yuma; Florence B. Yount (1945), Prescott; Chas. S. Kibler (1945), Tucson.  |
| Syphilis and Social Diseases—L. H. Howard (1947), Tucson; L. O. Jekel (1946), Phoenix; George O. Bassett, (1945), Prescott.   |

Tuberculosis Control—James H. Allen (1947), Prescott; Samuel H. Watson (1946), Tucson; E. W. Phillips (1945), Phoenix.

###### Non-Scientific

Auxiliary Advisory—Geo. R. Barfoot (1947), Phoenix; W. Claude Davis (1946), Tucson; Florence B. Yount (1945), Prescott.

Editing and Publishing—Jesse D. Hamer (1945), Chairman, Phoenix; A. L. Lindberg (1946), Tucson; Walter Brazie (1947), Kingman.

Industrial Relations—Meade Clyne, Tucson; James Lytton-Smith, Phoenix; A. C. Carlson, Jerome; O. E. Utzinger, Ray; John W. Pennington, Phoenix; Frank J. Milloy, Secretary to Committee.

Medical Defense—D. F. Harbridge, Chairman (1945), Phoenix; A. C. Carlson (1946), Jerome; John W. Pennington (1947), Phoenix.

Medical Economics—C. E. Patterson (1946), Tucson; Meade Clyne (1945), Tucson; Robert S. Flinn (1947), Phoenix.

Public Health Education—H. L. McMartin (1947), Phoenix; J. S. Gonzalez (1946), Nogales; Paul H. Case (1945), Phoenix; Geo. O. Bassett (1945), Prescott.

Public Policy and Legislation—Charles A. Thomas (1947), Tucson; Walter Brazie (1946), Kingman; Jesse D. Hamer (1946), Phoenix.

State Health Relations—Louis G. Jekel (1947) Phoenix; E. Henry Running (1946), Phoenix; Donald F. Hill (1945), Tucson.

### PRESIDENT'S MESSAGE

My message this month will include comments on the Annual Meeting and on current legislative procedures. The message will be brief as both subjects are covered on other pages of this Organization Section of our Journal.

As you know by now, *the Annual Meeting has been cancelled* by edict of Washington through the Office of Defense Transportation. A MEETING OF THE COUNCIL AND HOUSE WILL BE HELD ON SATURDAY, APRIL 28, AS LESS THAN 50 WILL BE IN ATTENDANCE AND THE MEETING IS THEREFORE IN ORDER. All delegates and Council members will be notified soon as to the place for these business sessions—whether at Tucson as originally planned or at Phoenix. As we go to press we do not have this informa-

tion as we are canvassing those who will attend to learn their choice of meeting place.\*

As to legislative procedures, you know that the Legislature has been in biennial session since early January with adjournment in order on March 8. You will find a review of our legislative activities on other pages of this section. We are grateful, indeed, for the outcome of the efforts of the Association to maintain qualifications on a high plane for all those practicing the healing arts in Arizona and with equal fairness to all practitioners in all branches. The Senate and the House of this Seventeenth Legislature have demonstrated by their vote

\* Tucson will be the meeting place for Council and House.

that they are with the medical profession and organization in continuing high professional standards for those treating the sick and injured of this state. This is as it should be if the health interests of the people of the state are to be served properly. Look up your local Senators and Representatives when they come home at the conclusion of this session and express your personal thanks to them for their fair-minded support of health legislation.



President.

## REPORT ON LEGISLATION

Long before the *Seventeenth Legislature* convened in early January the Association knew that efforts would be made to repeal the Basic Science Law of Arizona. Radio programs, sponsored by the **Associated Chiropractors of Arizona**, had been on the air (KOY) three times weekly for a long period of time attacking repeal. **The Arizona Daily Star (Tucson)**, prior to and during the legislative session, waged an editorial campaign against the law and against the medical profession. There was a marked similarity of propaganda from these two vociferous opponents.

The Association had been prepared for several seasons past to seek an amendment to the Basic Science act granting reciprocity with other states having a similar law. Each legislative session saw other health matters before the legislature for their consideration and the time was said to be inopportune for seeking additional legislation. This session, with no health matters having a prior right with the legislature, the Association offered its bill to amend the law and grant this reciprocity. *Senate Bill No. 68* was therefore introduced to amend the law as described. Senator Norman Fain of Yavapai (Prescott) introduced the bill for the Association. Laws of other states had been carefully studied and the amendment offered was similar to those of the other states.

As a counter measure Senator Hubert H. d'Autremont of Pima County (Tucson) introduced *Senate Bill No. 43*. His bill would have made the Basic Science law worthless. In addition, the House threw in *House Bill No. 125* for the purpose of repealing the Basic Science Law in its entirety. Representative F. W. Timmerman of Maricopa County (Phoenix) introduced this bill 'by request'. Strong support for the opposition immediately arose. The Association followed its usual procedure of laying facts before the Legislature by means of

prepared material and by calling on all county medical societies to lay the same facts before the legislators of their respective counties and communities. Physicians knowing certain legislators personally also gave the same support. Our membership and societies responded and THE LEGISLATURE ALSO RESPONDED TO THIS PROGRAM OF FACTS BY ENACTING SENATE BILL NO. 68 AS INTRODUCED WITH BUT ONE MINOR AMENDMENT.

The Association has nothing but praise for the legislative branches in their deliberations. The end results prove that the majority of the House and Senate (there were no dissenting votes in either branch on final votes) accepted the truth as it was laid before them, and little difficulty was experienced in securing the final enactment of Senate Bill No. 68 and the defeat of Senate Bill No. 43. House Bill 125 was shelved and did not come out for vote.

In addition to the Basic Science amendment, the Association sponsored an amendment to the *Medical Practice Act* eliminating the osteopath from that Board and creating a board of five physicians and surgeons of medicine. The Osteopathic Association also desired this amendment as they have had their own board since the enactment of their law. Senator Norman Fain of Yavapai County and Senator William F. Kimball of Pima County (Tucson) introduced *Senate Bill No. 59* which would so amend the Medical Practice Act. As we go to press, the Senate has unanimously passed this bill and the House promises its vote before adjournment.

Following is the amendment to the Basic Science Law which will go into effect 90 days after the Governor approves and signs the same:

"AN APPLICANT, A CITIZEN OF THE UNITED STATES, FURNISHING SATISFACTORY PROOF OF CERTIFICATION, REGISTRATION, OR LICENSE ISSUED TO SUCH APPLICANT WITHIN ANY STATE OR TERRITORY OF THE UNITED STATES IN WHICH REQUIREMENTS FOR THE SAID APPLICANT AT THE DATE OF THIS LICENSE SHALL BE DEEMED BY THE BOARD TO BE EQUIVALENT TO THOSE OF ARIZONA, SHALL BE ELIGIBLE FOR REGISTRATION BY RECIPROCAL ENDORSEMENT AT THE DISCRETION OF THE BOARD, UPON PAYMENT OF THE REGISTRATION FEE PRESCRIBED IN SECTION 67-206."

Through the columns of this Journal, the Arizona Medical Association wishes to express its appreciation to Senator Norman Fain of Yavapai County and to Representatives N. S. McCallum of Yuma County (Yuma) and A. Berky of Pima County (Tucson) for their tireless leadership in their respective chambers. To the

Legislature as a whole goes a similar vote of thanks. Their support was strong in behalf of the health interests of the people in the state, and the final vote of both legislative bodies is gratifying indeed to the medical organization of the state in its policy of supporting sound health legislation for the people of the state and in seeing that only the best trained practitioners in the various healing arts are made available to treat them when sick or injured.

*THANK YOU, SEVENTEENTH LEGISLATURE, IN BEHALF OF THE PEOPLE YOU ARE REPRESENTING!*

President ..... Dan L. Mahoney, Tucson  
 Secretary ..... Frank J. Milloy, Phoenix  
 Chairman of Council George O. Bassett, Prescott

Committee on Public Policy and Legislation:

Jesse D. Hamer, Phoenix  
 Charles A. Thomas, Tucson  
 Walter Brazie, Kingman

### Staff Meetings

GILA COUNTY MEDICAL SOCIETY  
 January 23rd, 1945

(This meeting was a dinner party given by Host and Hostess Dr. Clarence Gunter and wife of Globe, Arizona. Dr. Gunter was the retiring president of the Gila County Medical Society. This social affair was honoring the doctors and their wives of the Gila County Medical Society and was heartily enjoyed by all. Those present were: Dr. and Mrs. Cyril M. Cron, Dr. and Mrs. Clarence Gunter, Dr. and Mrs. Nelson D. Brayton, Dr. and Mrs. T. C. Harper, Dr. and Mrs. A. J. Bosse, Dr. and Mrs. Russell R. Noice, Dr. and Mrs. Marcus G. Kelly, Dr. and Mrs. Ira E. Harris. Special guests were: Mr. and Mrs. George Evans, Dr. and Mrs. C. R. Swackhamer of Superior.)

Minutes of the preceding meeting were read and approved.

No business arising out of the minutes.

No new business.

No special communications.

Report of secretary-treasurer showed five dollars and fifty-five cents in the treasury.

Nomination of officers for the ensuing year then occurred and elections were as follows:

President—Dr. Russell R. Noice of Miami

Vice-President—Dr. T. C. Harper of Globe

Secretary-Treasurer—Dr. Nelson D. Brayton of Miami (re-elected)

Censors—Term expires Dec. 31, 1948—Dr. A. J. Bosse

Other Censors—Term expires Dec. 31, 1945—  
 Dr. Ira E. Harris

Term expires Dec. 31, 1946—  
 Dr. Russell R. Noice.

NELSON D. BRAYTON, Sec.

PIMA COUNTY MEDICAL SOCIETY

Tucson, Arizona

January 6, 1945

*Scientific Program*

1. "Peritoneoscopy"  
 Dr. N. K. Thomas
2. "Basic Science Law"  
 Dr. V. M. Gore

Following is the list of officers elected January 9th, 1945, for this year:

President—Dr. A. L. Lindberg

Vice-President—Dr. George L. Dixon

Sec'y.-Treas.—Dr. Donald F. Hill

Censor—Dr. V. M. Gore

Delegates—Dr. Meade Clyne

Dr. C. S. Kibler

Dr. V. A. Smelker

Dr. E. M. Hayden

Alternates—Dr. C. A. Thomas

Dr. Benson Bloom

Dr. Roy W. Rudolph

Dr. Ed. J. Gotthelf.

Dr. W. Brooks Steen who has been stationed in Gulfport, Mississippi, practically ever since he entered the Armed Forces, has been transferred to Lake Charles Army Air Field, Lake Charles, Louisiana, and made Chief of the Medical Service there.

**MARICOPA COUNTY MEDICAL SOCIETY**  
Monday Evening, February 5, 1945

*Scientific Program*

"Wound Healing"

Dr. John W. Dulin, Associate Professor of  
Surgery, University of Iowa.

**ST. MONICA HOSPITAL, PHOENIX**

*Scientific Program*

1. Review of Autopsies:  
Dr. Maurice Rosenthal.
2. Acute Abdominal Crisis of an Adolescent  
due to rare cause:  
Presented by Dr. Louis Baldwin.  
Discussion by Dr. James Ovens.

3. Massive Juvenile Hypertrophy of the  
Breasts.  
Presented by Karl S. Harris.

**ST. MARY'S HOSPITAL, TUCSON**

January 16, 1945

*Scientific Program*

Chairman—Dr. J. H. Woodard

1. Pregnancy, complicated by Nephrosclerosis and Hypertension.  
Dr. R. K. Hausmann.
2. Pulmonary Abscess.  
Dr. C. S. Kibler.
3. Possible Aplastic Anemia. Case for diagnosis.  
Dr. S. J. Grauman.

## ANNUAL MEETING CANCELLED

By request of the Office of Defense Transportation, Washington, D. C., the Annual Meeting of the Arizona Medical Association for April 27-28, 1945 has been cancelled.

This action was taken by the Office of Defense Transportation pursuant to an application from our Council to hold the meeting as scheduled. It was the opinion of the Council that the session was in the war effort in that the papers to be presented would bring to the physicians of this state the latest information on war-borne diseases. By directive of February 8, the ODT has ruled otherwise and the meeting is now cancelled.

The Council and House will convene at Tucson, Santa Rita Hotel, April 28. The Council at 10:00 A. M. The House at 2:00 P. M.

Make Your Reservations Now.

SIGNED,

CHARLES P. AUSTIN, M. D., Chairman  
Committee on Scientific Assembly

DRS.: G. F. MANNING, FRANK J. MILLOY,  
ROYAL W. RUDOLPH, GEORGE HESS,  
Members

## Clinical Pathological Conferences

### ST. JOSEPH'S STAFF MEETING APRIL 10, 1944

The case is that of a Mexican boy, 12 years old, who entered the hospital because of nose bleed, melena, vomiting, hemorrhagic spots on the hands and legs. He had been unconscious for the past 24 hours. He was perfectly well until two weeks ago, when he began to break out with small red spots up to three-quarters of an inch in diameter, which broke down, discharging pure blood. Five days ago, his nose started to bleed; three days later, bright blood was noted in the stools. His nose was packed yesterday and he started to bleed from the mouth. A day or two before admittance he started to vomit, complained of headache in the frontal and occipital regions and gradually became unconscious, being drowsy at first and able to talk a little, but later became completely comatose. His arms and legs have been twitching some—about the same on each side.

Past history reveals no illness at all; was stung by a scorpion three years before and was very sick as a result—otherwise in very good health. Father and mother are living and well and there are six siblings all living and well. There is no history of familial disease.

His blood pressure is 120 systolic; 40 diastolic. Temperature 103, pulse 84, right pupil is widely dilated; the left appears normal. Neck shows no glandular enlargement or stiffness. The lungs are clear; the pulse is irregular in rate and volume; the heart is not enlarged nor are there murmurs or extra beats. The abdomen is soft, no masses present. The legs are covered with purple spots up to an inch in diameter; some have crusts. Sensation of all sorts was missing and the muscle tone was less on the right side. Reflexes of the lower extremities were absent on the right side and varied in response on the left side.

Hemoglobin, 49%; red count, 2.5; white count, 18,150; coagulation, 3 min. 50 sec. bleeding time, 11 min. 20 sec. Anisocytosis and poikilocytosis were marked. 1 normoblast; 7 small lymphocytes and 93 neutrophiles. Non filaments 15%; platelet count 170,000. Kahn and Wasserman negative.

After being put to bed, the pulse began to increase, breathing became more difficult, dropping to 10 per minute; pupils became dilated and a few convulsions were noted. The pulse gradually increased in rate to about 180, respirations gradually decreased and the patient expired.

The following conditions were mentioned in the general discussion of the case:

1. Fulminating, Idiopathic Purpura Hemorrhagica.
2. Aplastic Anemia.
3. Aleukemic Leukemia.
4. General Sepsis.

#### *Discussion*

##### DR. TERESA MORAN:

This case shows a marked hemorrhage in practically all the organs of the body. There was no evidence found at autopsy of a septic process. The endocardium was normal. No endocarditis was seen. The valves were normal in appearance. The spleen was definitely increased in size and shows a picture which is associated with Purpura hemorrhagica, that is the infiltration of the splenic cords by blood cells. No evidence of leukemia was found. (The bone marrow studies will be made after decalcification.) The entire picture is that of a purpura hemorrhagica which is essential in type. There is no etiological factor found.

#### *Anatomical Diagnosis*

1. Thrombocytopenic purpura with
  - a. Generalized purpura.
  - b. Cerebral hemorrhages.
  - c. Myocardial hemorrhage.
2. Cerebral edema.
3. Edema and hemorrhage, left orbital cavity.
4. Abdominal and G. I. hemorrhages.
5. Pulmonary hemorrhage.

## MEDICO - LEGAL SECTION

### IN THE SUPREME COURT OF THE STATE OF ARIZONA

This is an accident that resulted in hernia to the respondent, Fred Meier. The accident, which is the subject of this action, occurred on or about the 13th day of July, 1942, and on said date while he was loading meat at the Arizona Grocery warehouse, and while carrying heavy cases onto the truck, Meier slipped and strained himself. He felt a pain in the region of the groin but never thought much about it and continued to work that day. There was some swelling that night and the next day but he didn't know what it was. Meier stated that about a week after that he told his foreman, A. G. Bacon, about the incident. Bacon testified, when asked how long a time had elapsed before Meier told him, "it might have been a week or ten days, or maybe two or three days." Of Meier's own accord he purchased a truss of the Southwest Surgical Supply Company in Phoenix, and wore the same for about

(Continued on page 124)

## *Medical* QUARTER HOUR

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Attractive pamphlets are being printed for distribution. When your supply arrives, display them where each patient may pick one up and take home for ready reference. The programs for several weeks ahead are listed on the following page in the order in which they will be heard. Listen to them, have your family do so. Ask your patients for their opinions of the program. The Committee will appreciate having a report from you.

### COMMITTEE ON PUBLIC HEALTH EDUCATION

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### *American Medicine Serves The World At War*

Transcribed interviews. Series for January 22 through March 12, 1945.

1. TREATMENT OF WAR CASUALTIES: Rear Admiral Howard W. Smith, MC, USN.
2. SURGICAL ADVANCES IN WAR TIME: Edward J. McCormick, M.D., Toledo, O.
3. HEALTH IN HAWAII AT WAR: Forrest J. Pinkerton, M.D., Honolulu.
4. PUBLIC HEALTH PROBLEMS IN WAR TIME: Warren F. Draper, M.D., USPHS, Washington, D. C.
5. EYE ACES AND EYE FAKES: Harry S. Gradle, M.D., Chicago, Ill.
6. CANCER IN CHILDHOOD: Frank L. Rector, M.D., Lansing, Mich.
7. TRAINING GOOD DOCTORS: Victor Johnson, M.D., Chicago, Ill.
8. PROTECTING PATIENT AND PHYSICIAN: Austin E. Smith, M.D., Chicago, Ill.

### *More Life For You!*

Transcribed interviews and round table discussions. Series for March 26 through June 18, 1945.

1. WHY WE GROW OLD: A. C. Ivy, M.D., Northwestern University; Arno B. Luckhardt, M.D., University of Chicago.
2. DIET AND FOOD: C. A. Elvehjem, Ph. D., University of Wisconsin; J. S. McLester, M.D., Chairman, and George K. Anderson, M.D., Secretary, A.M.A. Council on Foods and Nutrition.
3. GLANDS: E. L. Sevringshaus, M.D., University of Wisconsin; Austin E. Smith, M.D., Secretary, A.M.A. Council on Pharmacy and Chemistry.
4. THE SKIN AND ITS CARE: Clark W. Finnerud, M.D., University of Illinois.
5. MENTAL HEALTH: Juless Masserman, M.D., University of Chicago.
6. HEART DISEASE: Edwin P. Jordan, M.D., Assistant Editor, JOURNAL of the A.M.A., W. W. Bauer, M.D.
7. CANCER: Maude Slye, M.D., University of Chicago; Max Cutler, M.D., Chicago Tumor Institute; Frank L. Rector, Michigan Department of Health.
8. KIDNEY DISEASES: Herman L. Kretschmer, M.D., University of Illinois; George E. Coleman, M.D., Northwestern University.
9. BLOOD PRESSURE: Nathan S. Davis, III, M.D., Northwestern University.
10. JOBS AND HEALTH: Stanley J. Seeger, M.D., Chairman, and Carl M. Peterson, M.D., Secretary, A.M.A. Council on Industrial Health; J. G. Townsend, M.D., U. S. Public Health Service.
11. ARTHRITIS: Ernest E. Irons, M.D., University of Illinois.
12. SAFETY: Ned H. Dearborn, National Safety Council; Carl M. Peterson, M.D., W. W. Bauer, M.D.
13. LIVING SUCCESSFULLY: Morris Fishbein, M.D., Editor, JOURNAL A.M.A.

### **KEEP COOL**

Transcribed interviews with Dr. W. W. Bauer of Chicago. Series for June 25 through September 10, 1945.

|                                |                        |
|--------------------------------|------------------------|
| 1. VACATION EXERCISE PROBLEMS. | 7. POISON OAK OR IVY.  |
| 2. HEALTH IN SWIMMING.         | 8. KEEPING COOL.       |
| 3. SAFETY IN SWIMMING.         | 9. LIGHT SUMMER MEALS. |
| 4. SUNBURN—TAN—FRECKLES.       | 10. PICNIC LUNCHES.    |
| 5. HEAT AND SUN.               | 11. HIKING.            |
| 6. INSECTS.                    | 12. HAY FEVER TIME.    |

(Continued from page 121)  
 two weeks and then purchased another one from the Arizona Brace Shop, and it seems as though a statement for the second purchase was dated August 5, 1942.

The records before us show that a report of hernia was made to the Industrial Commission of Arizona by a typewritten report. The report was dated the 13th day of July, 1943. In that report, however, there was a statement under "Remarks" by Meier to the effect: "I finally decided that it was something that should be looked after and so I went to Dr. Kober on July 6th, 1943. I kept working because most of the time the trouble was not very painful. I tried to wear a truss and that made it hurt and so I quit wearing or trying to wear a truss. I bought two trusses with my own money."

The Industrial Commission, after hearings, entered its award and findings for Meier, and after denial of rehearsing filed by petitioners herein, the case has been brought to us on a writ of Certiorari.

It is the contention of the petitioner herein that somewhere around the 9th, 10th or thereabouts in July, 1942, respondent Fred Meier sustained the injury complained of but that he made no report to his company nor to a

physician nor did he file a claim with the Industrial Commission for a period of more than one year thereafter.

It would seem from the facts in the case that more than a year had elapsed from the time of the injury until the claim was filed or a doctor was consulted on the subject. The respondent Meier, however, did some few days after the injury report to his foreman, A. C. Bacon, and Bacon testified that he failed to turn in the report to his company.

This is a case where Meier continued to work, and still continues to work, for the petitioner and from a statement from counsel on both sides in open court he has proved to be an excellent employee and evidently his services are well liked. It is the claim of Meier that he failed to report the injury because it was minor. He testified at the time he slipped, the slipping causing the injury while he was carrying a load, that something had occurred to him, but did not consider it at all serious, and later on bought a truss, and thereafter bought two more with his own means, and it was not until July 6, 1943, according to the claim that he filed with the Industrial Commission, that he went to Dr. Kober and reported his accident and gave information concerning same. He went to the Industrial Commission on July 13, 1943,

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and filed a workman's claim for compensation and in that claim for compensation it was stated the date injury was sustained as about January 15, 1943.

It is evident to us that Meier was injured in July, 1942, and we can see no justification for the report of the Industrial Commission that he was injured in 1943. A close examination of the typewritten copy of that report, however, discloses that there was an erasure and very likely there was some confusion and there was inserted January 15, 1943, under the heading of "Date of Injury."

It is our holding in keeping with out statute that from the friendliness that existed between the employer and employee in this case, and the evident endeavor of the employee to keep on working and not report an injury unless it was really necessary, that such good faith was shown that it was within the province of the Industrial Commission of Arizona to invoke the statute of our state, Section 56-966, 1939, wherein it, in part, says:

Whenever an accident occurs to an employee, the employee shall forthwith report such accident and the injury resulting therefrom to the employer, and any physician employed by such injured employee shall forthwith report such accident and the injury resulting therefrom to the employer and to the

commission, if it believes after investigation, that commission . . . but the commission may relieve said injured person or his dependents from such loss or forfeiture of compensation the circumstances attending the failure on the part of the employee, or of his physician, to report said accident and injury are such as to have excused the said employee and his physician for such failure to so report."

The foregoing is in keeping with the case of Maryland Casualty Company v. Industrial Commission, 33 Ariz. 490, 266 Pac. 11, and also with the case of Hartford Accident, etc. Co. v. Industrial Commission, 43 Ariz. 50, 29 Pac. (2) 142. In the latter case a period from April 29, 1931 until May 11, 1933, elapsed between the date of injury and the date when the injured person filed his report and claim for compensation. And from that case we quote the following:

"Petitioner urges that in Zagar v. Industrial Com., 40 Ariz. 479, 14 Pac. (2) 472, and in Doby x. Miami Trust Co., 40 Ariz. 490, 14 Pac. (2d) 476, this court construed section 1447, supra, as requiring the workman to file his claim with the Industrial Commission one year after the injury. In both of those cases the question was as to when an application for an increase or re-arrangement of compensation should be made, and any

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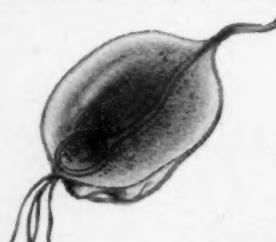
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language used in those cases must be viewed in that light. What he said in those cases, however, in nowise conflicts with the construction of that section that we now adopt. We still hold that the claim must be filed within one year after the date of the injury if the injury is of sufficient magnitude to be compensable. But, if it is slight or trivial at the time and non-compensable and later on develops unexpected results for which the employee could not have been expected to make a claim and receive compensation, then the statute runs, not from the date of the accident, but from the date the results of the injury become manifest and compensable. \* \* \*

The brief of amicus curiae filed by Mr. C. Leo Guynn has given us a very exhaustive treatise on the mechanics of inguinal hernia, and while it has no assignment of error, it does present several propositions of law for which we are duly grateful.

We hold that this case was not of sufficient magnitude at its inception to be compensable. That as shown by the respondent in carrying on his work, the injury was at first slight or trivial and not then compensable, but that later he could see that it was important that he report it and file his claim for compensation.

We find that petitioners herein have in no respects been prejudiced by the delays in this action, and in all respects we find and hold that the Industrial Commission of Arizona, in performance of its statutory duties, has been just and fair in its award herein.

The award is affirmed.

R. C. STANFORD.

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### Book Reviews

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TECHNIQUE OF THE STANDARD KAHN TEST AND OF SPECIAL KAHN PROCEDURES. By Reuben L. Kahn, Chief of Clinical Laboratories, University of Michigan Hospital, University of Michigan, Ann Arbor, Michigan, U.S.A., October, 1944. Published by University of Michigan Press; price \$3.25.

As the preface states, this paper is a revised and enlarged outline. "The Kahn Test — A Practical Guide" by the same author presents the subject in full form with elaborate discussions of the steps employed. Over-simplification has been avoided in the outline and the author has summarized with remarkable clarity the details of the various procedures. It is, of course, written particularly for pathologists and serological technicians.

Practicing physicians, however, should be interested in some of the procedures outlined by the author-serologist to give them better service. The entire space on the inside cover is utilized in a presentation of the proper method of

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collecting specimens—a subject too frequently taken for granted. Of particular significance also is the amount of space devoted to the subject of false positives and the newer Kahn procedures designed to evaluate them. New and interesting in this connection is the quantitative procedure employing 2.5% sodium chloride as the diluent instead of 0.9% salt solution. The "salt dispersion technique" and the "triple quantitative technique" employing serial dilutions made with distilled water, 0.9% sodium chloride and 2.5% sodium chloride also offer a new and promising approach to this perplexing problem.

The attention of the physician should be directed especially to the "request blank" of the University Hospital reprinted by Dr. Kahn as informative. Along with definitions and interpretations of the "general biologie" and "lueric" types of reactions, the following recommendation is given: "When repetition of the verification test is indicated, the intervals should be weeks instead of days." Also "The diagnosis of a false positive reaction often requires prolonged observation of a patient, and the test is intended to supplement, not to supplant, such observation."

The appendix of this paper attempts to outline for the technician the detailed procedures in the preparation and sensitivity adjustment of the Kahn antigen. Several new and helpful steps are included.

Robert L. Eaton, Sc. M., Pathological Laboratory, Phoenix, Arizona.

**INTERN'S HANDBOOK.** Under the direction of M. S. Dooley, A. B., M. D., Professor of Pharmacology, and Maynard E. Holmes, M. D., F.A.C.P., Professor of Clinical Medicine; by Members of the Faculty of the College of Medicine, Syracuse University. Third edition. J. B. Lippincott Co. Price, \$3.00.

This is a reference book containing brief and direct information for the busy physician and is especially adapted for the use of the intern in applying his hard-won knowledge to bedside use.

Relationships between the intern and the public, the hospital, and the staff, are dealt with briefly. Also, medical jurisprudence. There is a suggested outline for obtaining histories and making physical examinations. Chemotherapy, diseases of allergy, and endocrine disturbances are given special emphasis. Information on nervous and mental diseases is very concise.

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\*Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154. Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60. Proc. Soc. Exp. Biol. and Med., 1934, 32, 241. N. Y. State Journ. Med., Vol. 35, 6-1-35, No. 11, 590-592.

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sia. In the drug section is information for using standard drugs, and emergency treatment of drug poisoning. Not to be overlooked are the subjects of blast injuries and resuscitation.

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L. J.

### IMPAIRED HEARING SEEN AS AN IMPORTANT POSTWAR PROBLEM

Rehabilitation of millions of men and women with impaired hearing is seen as an important postwar problem by leaders in civic and social work. Studies indicate that something like 15 to 20 million persons in the United States have subnormal hearing; that there are about three million children in this country with an average loss of nearly one-third of normal hearing.

War, it is believed, is accentuating the nation's hearing problems. The din of battle and the roar of war production are affecting many ears. Noise is hard on the ears. This fact has been recognized for many years. Impaired hearing is common among ironworkers, and the condition has long been referred to as "boilermaker's deafness." Unlike the eye, whose iris can stop down the amount of light entering the eye, the ear has no control mechanism to filter out undesirable noises.

Rehabilitation programs are being set up by the government for returning veterans with impaired hearing, and industrial organizations are taking steps to provide jobs to men and women with hearing shortcomings, as well as other physical handicaps, according to the Sonotone research laboratories. The problem of impaired hearing also is receiving greater attention from educators and leaders in social and economic problems of adjustment faced by persons with impaired hearing.

Despite the prevalence of impaired hearing, it was not until recent years that the importance of the problem was fully realized. Development of modern, efficient, hearing aids has stimulated interest in the subject. The new aids are small in size, effective and adjustable to the particular requirements of the individual. However, many persons with impaired hearing, through ignorance or neglect, still fail to avail themselves of the aids provided by modern electronic science. Years ago the same general situation existed in respect to eyeglasses. People were hesitant to wear spectacles; but now eye-



Longer and busier work days, with a shortage of materials and skilled help—these and other worries that increase the tension of the war years play havoc with those health habits so essential to well-being.

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glasses are used by millions of persons, young and old.

A similar change in habits will take place, it is believed, among the millions of persons with impaired hearing. It is estimated that less than one million hearing aids are in use in the United States, although statistics indicate that several times that number of persons should be receiving the benefits of such aids for better living. Indications are that during the postwar period of readjustment greater attention than ever before will be paid to the needs of the nation's hard-of-hearing.

### HOW WE TALK

The human voice is the most versatile of the sound-producing devices and notwithstanding extensive efforts, its many shades of tone cannot be duplicated faithfully by mechanical means, according to the Sonotone research laboratories.

Human speech is created by vibration of the vocal chord, whose tone is modified by the tongue, teeth and lips. This process of modification is known as articulation. The importance of the tongue in forming speech is demonstrated easily by opening one's mouth, keeping the tongue motionless, and making sounds. With the tongue in this position you cannot talk. In whispering the flow of air from the lungs is too small to set the vocal chords in vibration and the speech sounds are produced entirely by articulation.

Some speech sounds, as "s" and "f", are produced without the vocal chords by the expulsion of the air between the tongue and the roof of the mouth.

The average voice range is two octaves. The cavities of the mouth, nose, throat and sinuses act as resonators and contribute overtones to speech and give different voices their individuality.

Speech is learned through imitation of sounds which are heard. For this reason the ears have an important bearing upon speech. Voices of persons with failing hearing frequently undergo great modifications; in fact, changes in speech often are a sign of hearing impairment. Because of this close relationship between voice and hearing, speech correction often is an important part of hearing rehabilitation problems facing persons with impaired hearing.

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are straight.**

**The boy's are not.**

**The rooster got plenty of vitamin D.**



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Fortunately, extreme cases of rickets such as the one above illustrated are comparatively rare nowadays, due to the widespread prophylactic use of vitamin D recommended by the medical profession.

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**P**EOPLE who feel well balk at the idea of taking weekly injections, particularly if the injections are painful or make them feel ill. Therefore, once the early signs of syphilis disappear, many patients become indifferent to treatment. A recent survey shows that:

*only 1 out of 4 clinic patients with early syphilis, undergoing the standard 70-week course, continues treatment long enough to receive minimal protection against infectious relapse.*

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[141]



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1. Bull. N. Y. Acad. Med. 28:497 (Aug.) 1942.

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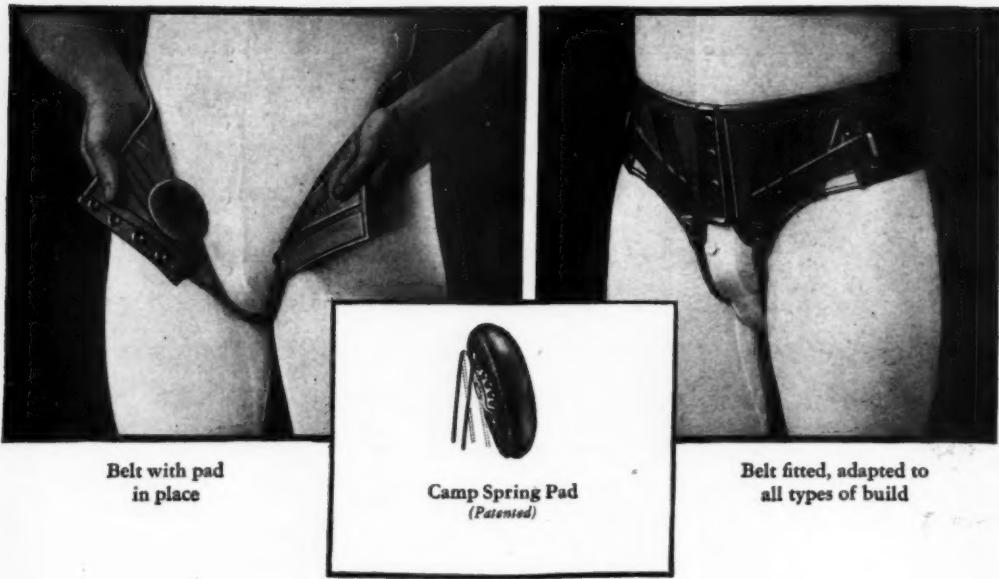
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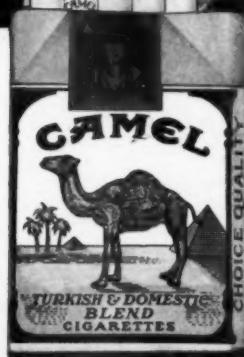
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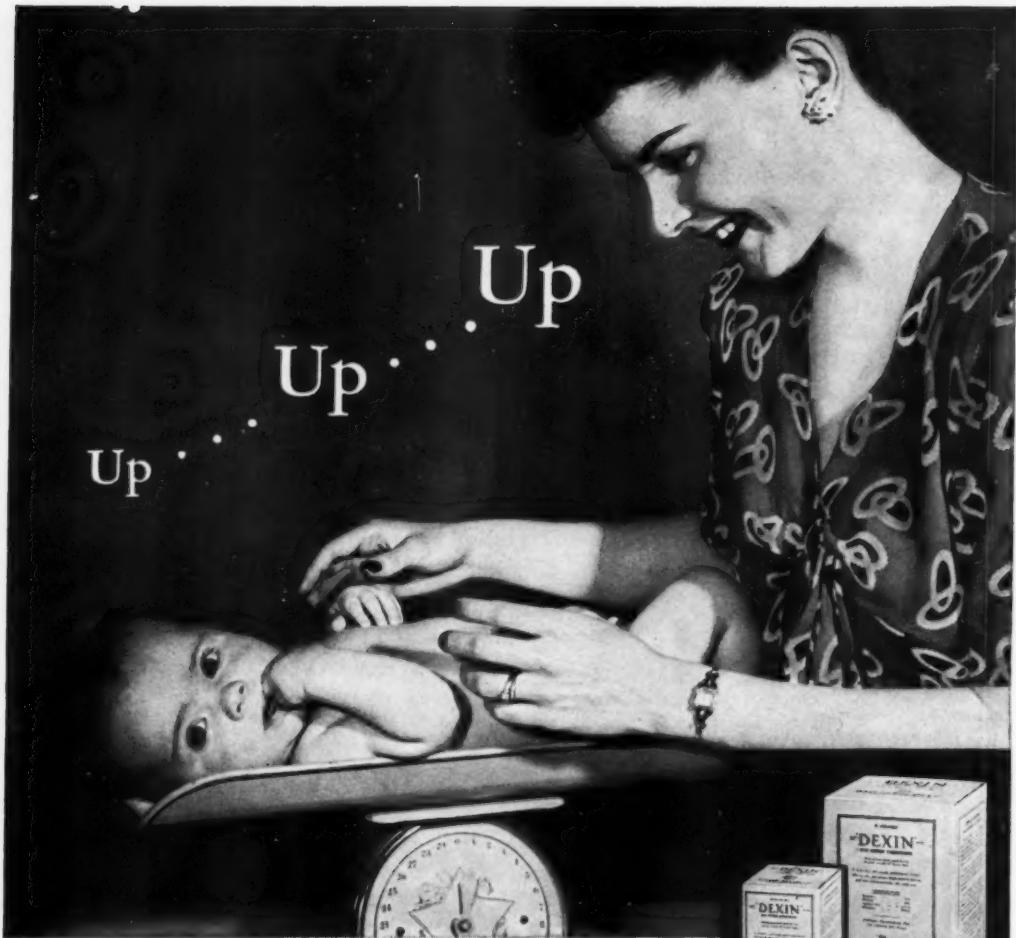
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[151]



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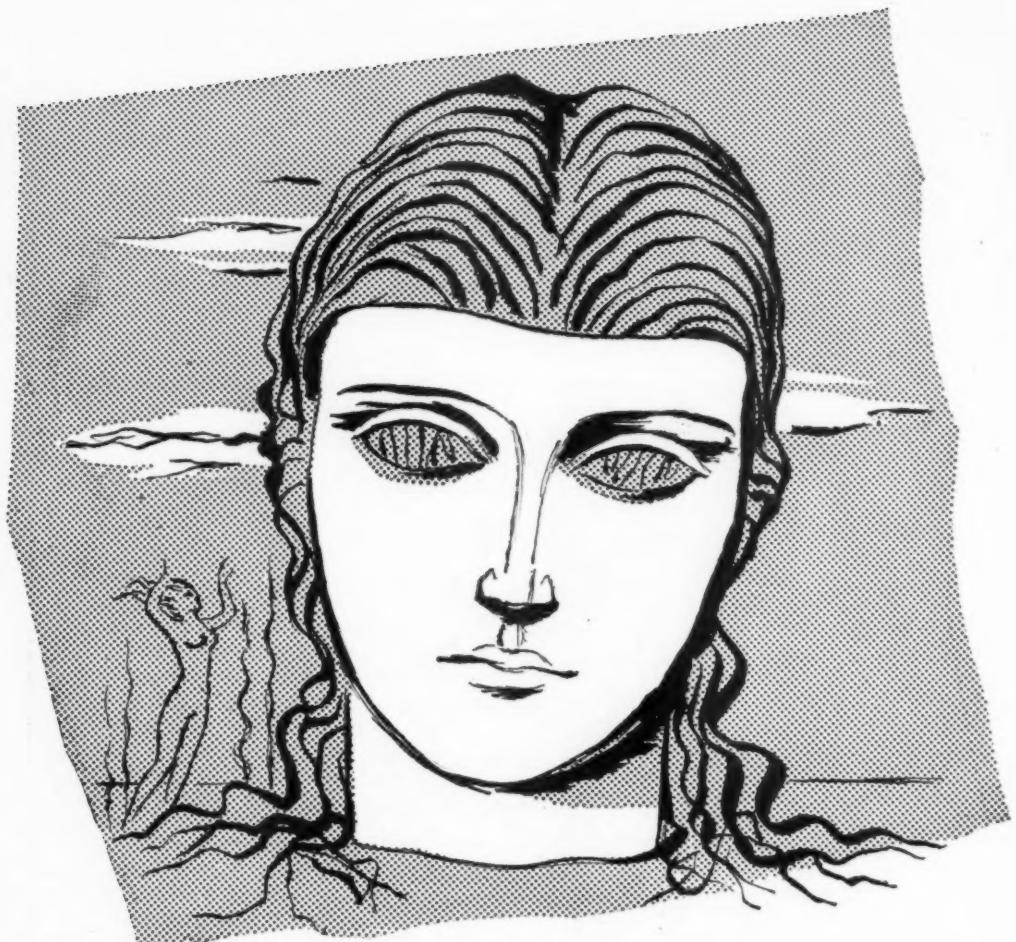
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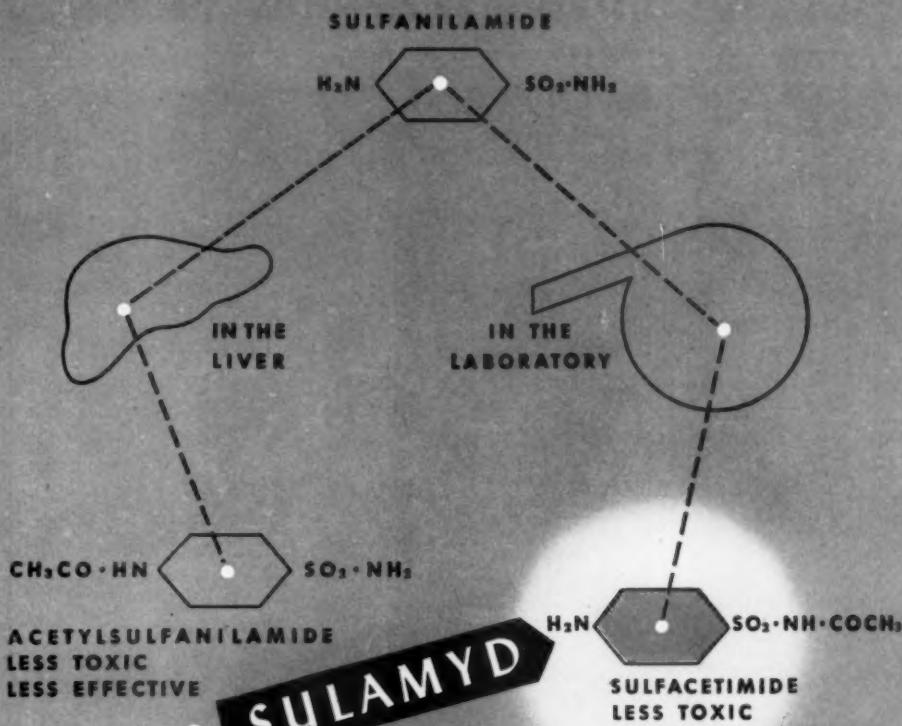
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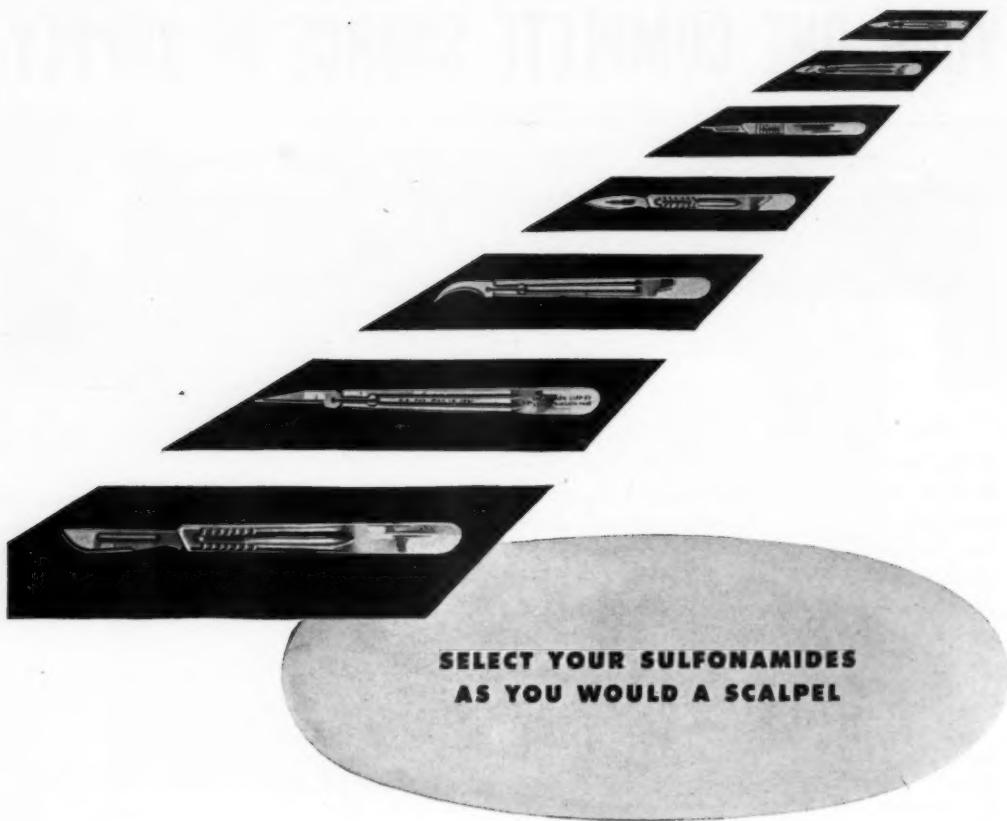
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## LOOKING AT MEDICINE\*

CHARLES PAUL AUSTIN, M. D.

Morenci, Arizona

**I**N these days of social change in the realm of living, it is well to stop and *Look at Medicine* and view its future in terms of its past and present achievements. Physicians are so close to the subject of Medicine that, as a profession, they are apt not to "see the forest for the trees." It is characteristic of those who strive to "point with pride" to their achievements and to "view with alarm" any change in their scheme of living and doing. Medicine has pointed with pride, and justly so, to its achievements in the field of scientific endeavor—achievements which have resulted in a longer, healthier and happier life span for the people of our nation. In spite of these advancements, Medicine today finds itself in the lime light—if not on somewhat of a spot—with the "well doers" of this land who would take the direction of the affairs of Medicine out of the hands of those trained and skilled in its prescription and turn it over to those whose experiences lie mainly in administering a program of political preferment under the guise of the "public good". So, I say, let us stop and *Look at Medicine* and invite our public to scan the subject with us so that misdirection may be averted.

Looking at Medicine from the standpoint of service, will its practice, as our predecessors developed it, survive or will it be caught in the tide of social change which has been swelling with a foreboding roar during these war years? The answer to this question may of necessity be vague, as yet, but the problems arising demand the careful study of, and the mature judgment in their solution of every practitioner of medicine.

The practice of medicine, as developed by our predecessors, concerned itself almost exclusively with restoring the body to a normal state of health once disease had attacked it, and with setting about it to see that this same disease was brought under control so it would ultimately never strike at the health of the community again. And a good job they did, these earlier Men of Medicine, as witness the progress of scientific medicine during the past half century.

The story of disease control, of miracle drugs and miracle surgery is too well known to need discussion here. Instead, let us get down to cases and look at Medicine as it is found today.

It is no new story that Johnny Doughboy is looking at Medicine and seeing it at its scientific best as battle wounds or illness strike him. He extols the "medieo" long and loud for what he is doing during this war. Citizens on the home front have never been more confident of the quality of medical care tendered them than now. There is nothing new about all this—it is an old story to all concerned.

It is the social reformist who would have all believe that America is a nation of physical weaklings as he dramatically points to the rejection of twenty-five per cent of all those examined for military service. Out of the resulting discussion has come a new term these past two years or so, a term that has the ring of a by-word to both the profession and the public. I refer to those two words heard on every side—"Physical Fitness."

A Physical Fitness program of national magnitude is in the immediate offing. The machinery of that program may not be discussed here because of space. As organized medicine looks at physical fitness, permit me to quote from a recent editorial appearing in the *Journal of the Indiana State Medical Association*. Says this editorial:

"Yes, we were shocked to learn that so many of our young people were unfit for military service, and we agree that something should be done about it. First, however, before deciding to do something, we must decide *what* to do. It will not help much just to do something—anything. Is it something that can be corrected? Is it something that we physicians should correct, or is it possibly something that can be done by the whole population? . . . General physical fitness is a desirable thing to have. It is a splendid ideal toward which to work. It will not be accomplished over night. We shall not gain it by dropping our time-tried methods which have brought us far, and dashing after a will-of-the-wisp which promises to bring us to it immediately. Let's keep up the good work, with physicians, dentists, teachers, preachers, coaches, parents, scoutmasters, Y. M. and

\* President's Address 1945.

Y. W. C. A., park boards, and everyone else right in there pitching. We must work together on this thing; we must avoid blaming each other; and we must keep right on doing even better the things we have been doing rather well."

Within that quoted paragraph, you will find the part the physician must play in this program of Physical Fitness. It is not a solo job but he must be on the team. Arizona will carry on the program as it comes to the medical association from the national committees.

Confusing the issue, the "Messengers of Change"—those do-gooders—have taken advantage of these war times as a proper era for their door-to-door dispensations. It is during these war times that the Wagner-Murray-Dingell bill\*\* has been proffered as the "Come one, Come all" solution for the medical ills, financial and otherwise, its sponsors have dreamed up for the people of this nation. Yet this panacea for all bodily ills facetiously neglects to include the indigent among those needing medical care and meriting medical service! An additional tax would have to be dipped out of the pot for the indigent who, above all others, is entitled to a tax-supported health program. It has been during war times that the Children's Bureau has dived down and come up with the EMIC program without benefit of advice from the profession which must perform the job and turn the trick. During these same times a vocational rehabilitation program has been promoted on a much larger scale than formerly, with a multitude of ills now covered and, perhaps, another multitude to be added gradually.

It is during these years of war that the Military has seen fit to shorten the education of physicians with a nonchalant wave of the hand. I would refer you to the *Saturday Evening Post* for January 27, 1945, to the article on Page 34 by Dr. Evarts A. Graham.\* The article is entitled, "Have the Armed Services Crippled Medical Education?" By reading this article you will see in black and white what you already know of changes in medical education during this war—that the splendid system of professional education which has enabled the surgeon to perform his miracles for Johnny Doughboy on the battle field is being relegated to the ash can while an abridged schooling—for a limited few—that

will give America fewer and poorer physicians for both the military and home front in the years ahead, is taking its place. With Dr. Graham, all must agree that "The future of American medicine requires a realistic approach to the needs of the Army and Navy, as well as the home front, for doctors—and not slapdash doctors, but doctors trained in the thorough manner which has given to American civilian and military medicine a leading position in the world." If there is anything wrong with medicine today, certainly this abridged program of medical education, sponsored by the government, will correct none of it.

It is our predecessors in *Medicine* who wiped out the diploma mills and elevated the medical colleges of our land to the high plane of turning out the best trained physicians in the world. By the force of a mailed fist is that now to be lost in part and in kind? Physicians will need take a hand in this new plan of medical education and assert themselves in this program so that Johnny Doughboy and Mary Citizen may have the same skilled medical care tomorrow they are receiving today. Medical education must not be permitted to deteriorate.

Comes now the question of cost as we look at Medicine—the cost that the Messenger of Change is crying in his "Hear, Ye, Hear, Ye" as he gallops across the commonwealth in his frenzy. Remember now, that this do-gooder has penned his bill, Wagner-Murray-Dingell,\*\* and assured Mr. and Mrs. John Q Public that here is medical care for free (at another 8%!) Long before his bill was spawned in the political stream, *Men of Medicine* were at work on local medical service plans whereby Mr. and Mrs. John Q. Public could prepare their own medical services from their own earnings at a figure so economical as to be beyond political comprehension. It was the physician who felt something should be done, and could be done, to lessen the financial load for his patient when illness struck with its attending accouterments of expense, and he set about doing it. Some twenty years ago, medical organizations initiated their first medical service plans—plans which have been slowly but soundly (all progress must be so) taking root until prepaid medical service and pre-paid hospital service are growing apace throughout the land today.

\* Professor of Surgery, Washington School of Medicine, St. Louis, Missouri. Major in World War I in charge of evacuation hospital. Appointed by Secretary of War in 1942 on committee to study medical needs of Army.

\*\* A new Wagner Bill has been introduced since this address was written.

Arizona physicians have not been behind in these studies and deliberations. This Association, of which we are all proud and working members, had its plan ready to launch but the depression era forbade the efforts. Business was not ready or able to lend its support. Now that Arizona is on the upgrade in trade, and business, a medical service plan for Arizona is again being studied and readied for the people of this state. The Blue Cross Hospital Service, in the past year, has taken root in the state and is softening the field for a medical service that is bound to follow.

The Wagner-Murray-Dingell bill is not needed in any of its provisions; it has no place in a program of Physical Fitness. It will not be wanted by the public if physicians themselves will place the proper label on this lethal public dose and show it for the skull and cross bones that it is! *Doctor, I say Mr. and Mrs John Q. Public prefer your plan and your trained professional guidance to any lethal political scheme that could ever be concocted!*

In looking at Medicine, another problem rears its head—I refer to the uneven distribution of physicians in which physicians tend to locate their practices in the larger centers of population. Arizona has been confronted with this problem for years in twelve of its fourteen counties, for it is only in two counties that the state population centralizes. In the past, the people in the smaller communities were given to scoff at the physicians locating there and to say with a shrug of the shoulders, "This physician can not be too good or he would have located at some larger place." The refusal of the people in these smaller communities to patronize their home-town doctor and their tendency to go for medical care to the larger centers, both within and without the state, have compelled the physician to move elsewhere. Now that travel is restricted, the small communities not only request, but demand, the "cream of the crop" physicians for their localities even though they have not been farsighted enough to patronize them in the past or to establish proper small hospitals and other medical accessories to entice physicians to locate and to remain there.

What can the medical profession do about this problem of unequal distribution of physicians? Will the plans proposed by the United States Public Health Service for the establishment of

diagnostic centers in the smaller centers lure physicians to them? It seems to be the consensus of written opinion that the answer is, at best, doubtful. Such centers will not insure the patronage of the local citizenry once gasoline and tires to travel to the larger centers are again available. Diagnostic centers in small communities will bring with them the problems of all such diagnostic centers. The best diagnostic centers can not solve, either for the public or the profession, the problems that arise from this type of practice. The period of trial and error will be costly for such services in a state of Arizona's geographical range and scattered population. As I see it, it is only by a program of health education where the public is brought to realize fully the stellar role played by the general practitioner in the general health picture that the problem of distribution of physicians can begin to approach solution. The general practitioner is the warp and the woof of medical practice and medical service. The specialist brings the pattern into bold relief. It is the general practitioner who must serve the smaller communities.

In *Looking at Medicine*, the political opportunist is raising another cry—the doctor is making too much money. In the not too distant past there was one William Osler, M. D., from whose lips fell many true pearls of wisdom. It was he who said, in measuring the worldly goods one might hope to amass upon entering the practice of medicine, that the first five years of service, so far as income might be concerned, is the bread and water period; the second five years, the bread and butter period, and the third five years that of cakes and ale. Fifteen years, if you please, to work up to the simple luxuries of living! A few physicians, along with an equal if not greater number of artisans, business men and professionals, have advanced a little too rapidly to the luxuries cited by this medical man of wisdom. This is regrettable for various reasons. This sudden financial affluence may be attributed to the trends of the times rather than to the faults of the profession, for it is as true today as when Dr. Osler spoke the words a few years back, that the first ten years of a medical practice is one of establishment and that it takes another half decade to reach the elements of comfort symbolically mentioned by this learned man. It can be truthfully said that, taking the medical profession the country over—outpost,

hamlet, and town—as many, if not more, physicians are living *below* the luxury level of fifteen years established practice as are living in it or above it! Such is the law of averages in all businesses and professions.

It is regrettable, but true, that there is a handful of medical practitioners among us in this country—whose kind will always be with us, even unto the end—who think only in terms of what they can get out of the practice of medicine, never what they can put into it. It is this minority of medical practitioners the political opportunist is citing in his harangue on the evils of the practice of medicine. It is to the majority group of medical practitioners—those tried and true doctors of medicine—to whom the public look for a sensible metamorphosis of service whereby the high standards of medical care may be maintained and yet made more adaptable to economic need.

In these various respects the public has looked at Medicine and found it good as revealed in recent surveys conducted by renowned agencies—and in no slap-dash manner—in representative states. These surveys reveal that the public is with that sound doctor of medicine who has always followed the best precepts of his profession and that the public is willing to follow this

doctor in any social or economic medical program he may outline for the public weal.

Words of appreciation for the scientific and economic endeavors of the medical profession as a whole come with fair frequency from laymen and from lay organizations. An editorial in the *Labor Digest* (Indianapolis, last February) said in part in support of the motives of the physician:

"The motives which inspire the young men to study medicine have never been mercenary. Some are moved by the blessed scientific curiosity which has brought about the civilization of man; some simply desire to serve suffering humanity and, allowing for the frailty of human nature, all no doubt are lured by the dignity of a learned profession . . . ."

In that editorial is to be found a true picture of the Man of Medicine. It is to that physician to whom the public look for all that is good in medicine, scientific or economic. It is that physician who has the esteem and respect of the public. Whatever new structure is to be built for the prescription of medical care, the public wish it to be designed by that physician. *Looking at Medicine*, the physician must, therefore, continue his efforts to see that the structure of American Medicine does not crumble into political dust. That is the way the public wants it. That is the way it shall be.

## CASTLESS AMBULATORY TREATMENT OF FRACTURES

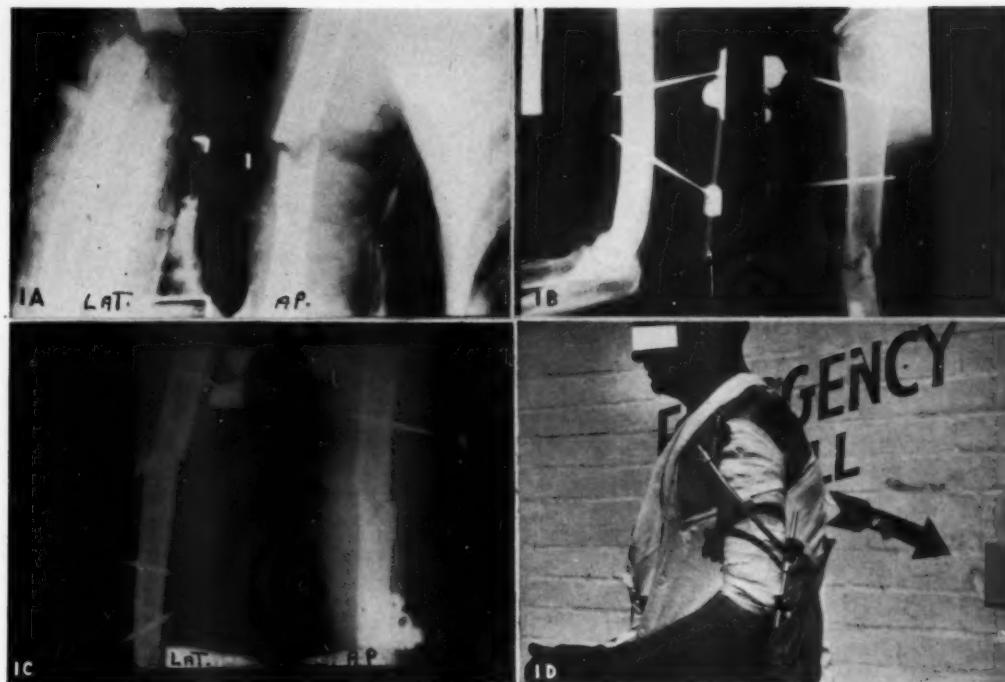
*Report of 23 Applications of The Roger Anderson Skeletal Fixation Appliance*

MATTHEW COHEN, M. D.  
Phoenix, Arizona

WAR conditions have created circumstances, that require the briefest hospitalization of the patient as is possible. Therefore, an ambulatory method for treating fractures of the extremities should appeal to the patient as well as to a public burdened with taxes, which would be required to furnish long hospitalization for indigent patients. This method provides early ambulation and as a result there are economic and psychic benefits. It has been our experience that this method is a better procedure for the treatment of unstable or difficult fractures rather than easier method. At this time, it would appear there have been many abuses of external fixation and it would seem certain that errors could be due not to the mechanism

itself, but from carelessness and ignorance on the part of the user. If such errors should spring from their own faulty technique, it would seem of vital importance to avoid blaming this method of treatment for their own errors in technique. Carelessness can easily creep in, as the procedure appears so simple.

In this series of cases presented, we insisted on a strictly supervised skin preparation, which included shaving, scrubbing with brush and green soap for 8-10 minutes, and sterilizing with ether followed governing the insertion of pins. Considerable care was taken to see that half pins penetrated beyond opposite cortex as illustrated in Fig. 1-B. Frequent roentgenograms were taken to determine if any distract-

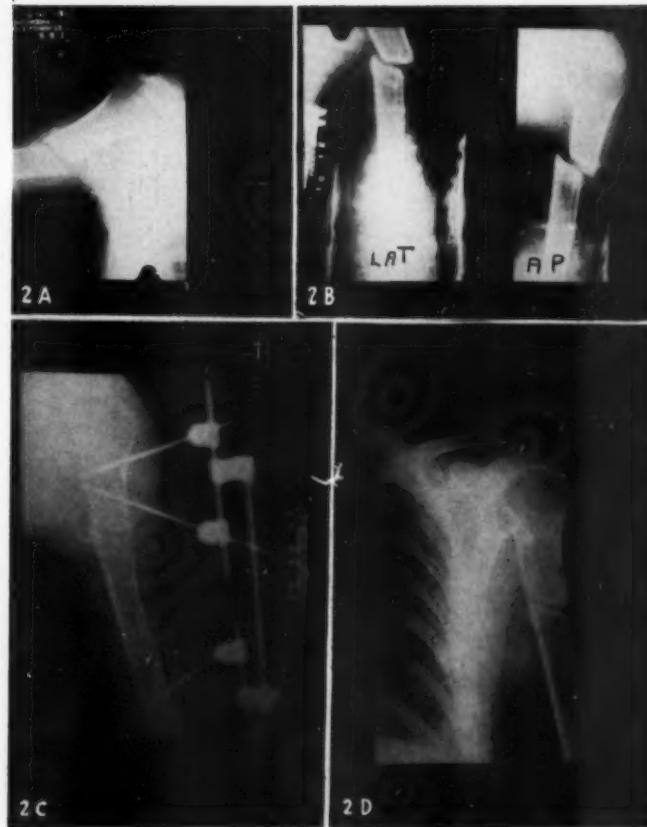


**Fig. 1A**—Case 1.H.T., age 64, shaft fracture of humerus. Hanging cast was applied on admission to hospital. Above film was taken 6 days following.

**Fig. 1B**—X-rays confirming pins penetrating beyond opposite cortex the proper depth.

**Fig. 1C**—Roentgenogram after reduction and immobilization by external fixation.

**Fig. 1D**—Photograph eight days after reduction and application of external fixation.



**Fig. 2A**—Case 2.W.P., age 79, X-ray upon admission to hospital.

**Fig. 2B**—Condition of fracture 7 months later, having been treated by hanging cast. Resulting in non-union.

**Fig. 2C**—Illustration of fracture after open operation and external fixation applied.

**Fig. 2D**—12 weeks after operation, patient had clinically sound union and confirmed by radiological reports.

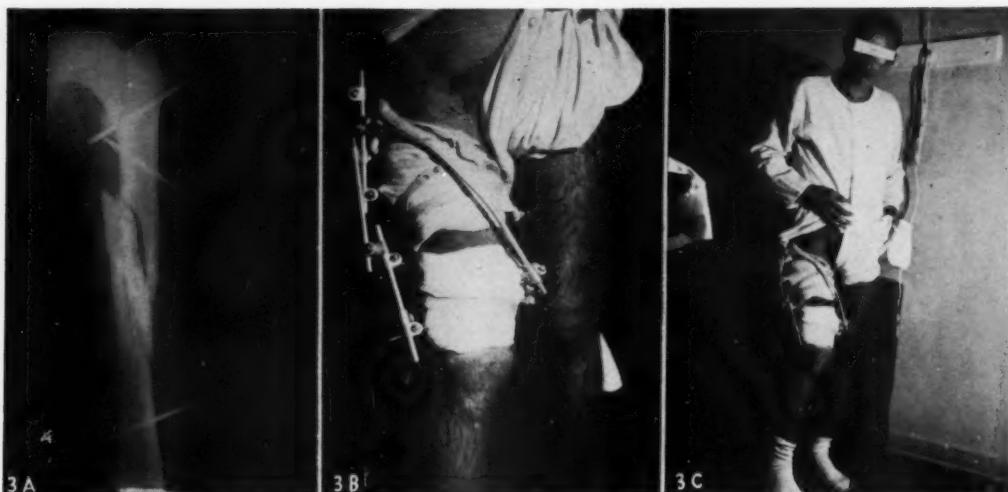


Fig. 3A—Case 3.J.G., age 14. Film shows comminuted shaft fracture after reduction with skeletal traction.

Fig. 3B—Photograph of splint on patient. Thru and thru pins in distal femur make it possible to use both sides of limb for fixation rods.

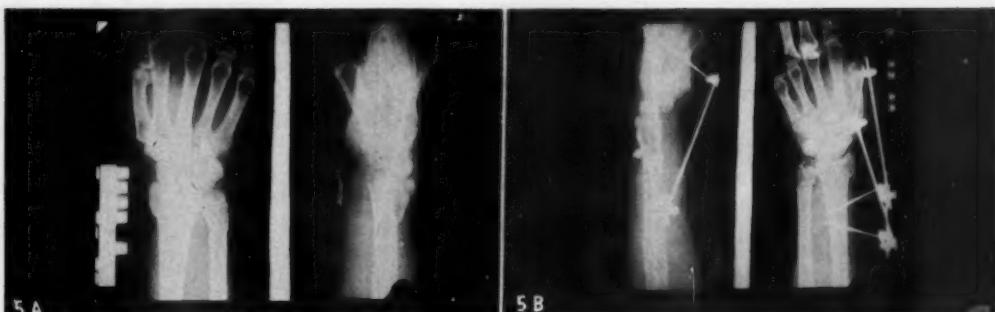
Fig. 3C—Patient three months after transfixation. Patient was released from hospital 14 days following operation. Original dressings were not removed for over 12 weeks.

Fig. 4A—Case 4.E.C., age 70, scout film which appears to be stable fracture of tibia.

Fig. 4B—Fracture after application of plaster cast, showing posterior and medial bowing.

Fig. 4C—Remanipulation with external fixation. Reduction was obtained manually.

Fig. 4D—Eight weeks later showing amount of callus. Splint was removed at the end of nine weeks.



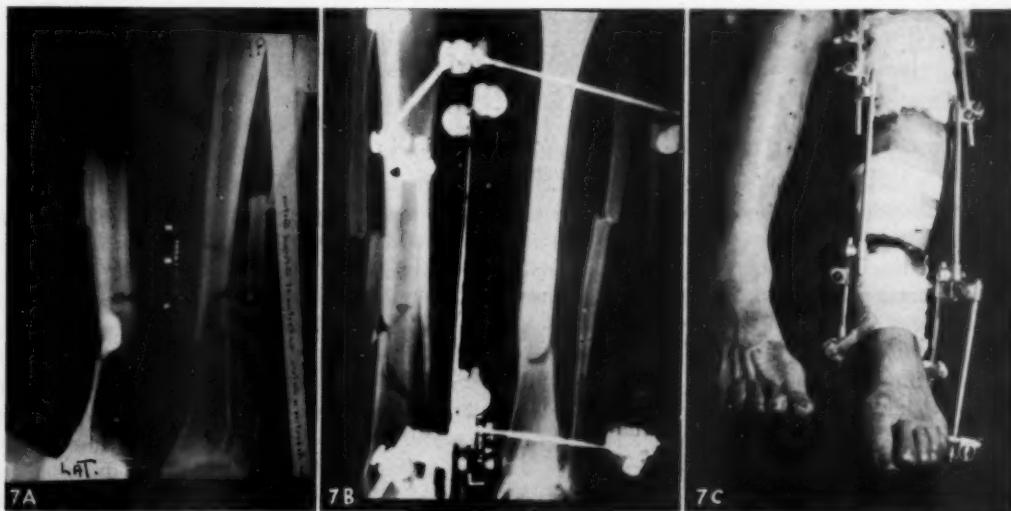
**Fig. 5A**—Case 5.G.C., age 60. X-ray revealing comminuted fracture radius and ulna.

**Fig. 5B**—Reduction with apparatus, immobilizing and retaining apposition. Patient has motion of all joints adjacent to wrist.



**Fig. 6A**—Case 6. J. A., age 59. Film reveals a crushing fracture proximal end of tibia with tibial condyle depressed posteriorly and lateral.

**Fig. 6B**—Film taken after inserting two pins above and below knee joint to obtain traction, a 3/32 pin thru condyle maintains approximation of the large fragment. End result was excellent with good healing and functional knee.



**Fig. 7A**—Case 7. S., age 67, compound, comminuted fracture distal and tibia and fibula. taken on date of admission.

**Fig. 7B**—Post reduction x-rays of pins in tibia. The os calcis was utilized for the lower pin of the distal unit, because of a large excoriated area at usual pin site.

**Fig. 7C**—Photograph of patient with Roger Anderson apparatus. Note foot rest assembly, which may be incorporated using fixation rods.

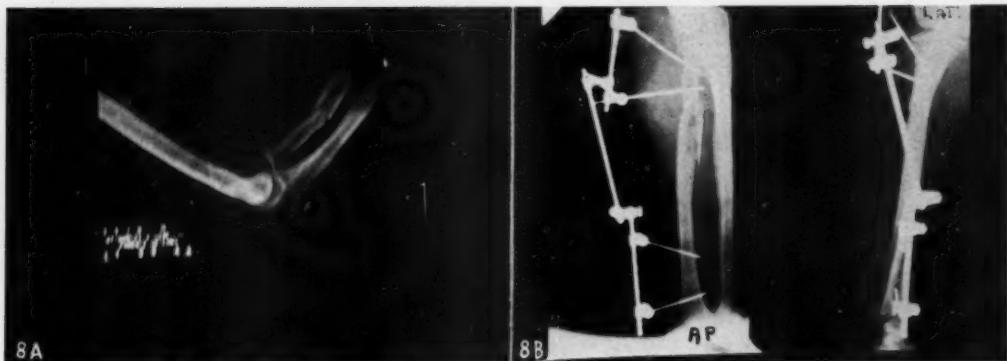


Fig. 8A.—Case 8. A. S., age 26, fractured radius plus dislocation before reduction.

Fig. 8B.—Fracture after insertion of pins and manual reduction. Patient had good motion of elbow throughout healing period.

tion or absorption had occurred, since a slight amount of separation will surely delay union, and impaction may be accomplished by a simple mechanical maneuver. Nursing staffs were cautioned about becoming over zealous in the matter of applying new dressings to pin wounds. Anderson advises the original dressing not to be disturbed. To discuss in detail the cases reported would go beyond the scope of this article. However, it can be said the Roger Anderson apparatus was used, being most adaptable to various types of fractures and relatively easy to apply and control.

#### SUMMARY

At present time we are unable to report an accurate end result on all cases. However, the

eight cases represent a fairly accurate cross section of the 23 cases transfixated by the author, and it would seem presumptuous to assume this limited number could be authoritative. These cases tend to show, external fixation can be safely used on compound fractures, non-union and under certain conditions may be recommended as a routine treatment for shaft fractures. We feel it would be justifiable to use external fixation more extensively, so far as we have been able to observe from the results of this series of cases.

15 E. Monroe

Acknowledgment is made to A. J. Carroll, M. T., for his technical assistance.

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## EARLY CARE OF CONCOMITANT MONOCULAR STRABISMUS

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**I**N recent years, more and more stress is being placed on the importance of early care in non-paralytic monocular esotropia. Irreparable ocular damage may be caused by late or no treatment. The most important point is to prevent an amblyopia ex anopsia (poor vision from non-use) from developing in the squinting eye. Secondly, an unfavorable influence may be exerted upon the patient's personality. The child soon develops an inferiority complex, becomes timid, backward and shirks from his normal environmental contacts. All of the above can be prevented by early treatment.

It is important to realize that squints appear-

ing in the first year of life are not always permanent. During the first four or five months of life, many infants' eyes will turn in for several minutes. This usually occurs when the infant is disturbed by pains from gastric or other disorders. It is fleeting in character and should cause no worry. However, when a squint occurs after four or five months of life it should be watched closely, as it may be a forerunner of a permanent type. However, many of these will disappear with the development of the fusion faculty. Therefore, it is only the ocular deviations which are present after the child is 10-12 months old which should cause concern.

Therapy should be instigated when the patient is 14-16 months old and the first step is the occlusion of the fixing or straight eye. This makes the patient use the crossing eye and by its use the vision will develop normally. The occlusion is easily carried out by patching the "good" or straight eye for five to six hours a day. If an alternating esotropia is present, i.e. where the patient fixes with one eye at one time and the other eye at other times, occlusion need not be carried out as the child is already using each eye at different intervals, and consequently, the visual acuity in each eye will develop normally.

The next step in the treatment consists of a refraction under full atropine cycloplegia with the prescribing of the full cycloplegic findings. This should be performed when the patient is 18 to 24 months old, depending upon the mental age of the child in question. The glasses should be worn constantly. The occlusion of the straight eye is continued with the wearing of glasses.

When the child reaches the age of four years, orthoptic training is begun. There are several

factors which govern the use of this training. In some cases, muscle exercises are contraindicated. In other cases, it can be determined in just a few lessons whether further training will be beneficial. If not, then surgery is indicated and is usually performed between 4 to 6 years of age. Orthoptic training is of no avail when a deep amblyopia is present. Even after surgery, muscle exercises should be continued until the eyes are straight and third degree fusion or deep perception is present.

Nonoperative treatment will result in a cure in about 50% of the cases. This figure is constantly being raised and will continue to do so because of the early treatment of these cases. Therefore, it is the early instigation of the first two steps, namely occlusion and refraction, which are the most important. Amblyopia is thus prevented and the prognosis greatly improved. First, more cases are cured nonsurgically. Secondly, even if surgery is performed, a perfect result can not be attained without the development of good fusion, which in turn can not be attained in the presence of an amblyopia.

710 Professional Building

## THE RELATION OF THE DOCTOR TO THE HOSPITAL

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OBVIOUSLY, in the discussion of this topic there are many angles to be considered and doctors, as a rule, being very rugged individualists, there naturally will be many angles and ideas of the relation of the doctor to the hospital. The different types of relation, phases, or factors involved will be dependent upon a multitude of elements. The type of hospital is one factor—depending upon whether it is a *community* hospital, a *stock company* in which the doctor is financially interested, a *general hospital*, a *private* hospital, a *non-sectarian* hospital, or a *religious* hospital. Then again it depends on whether the hospital is one of a *highly specialized type*, such as strictly a *children's* hospital, a *women's* hospital, or a hospital which confines its work to a certain type of disease or part of the body, namely, eye and ear, contagious or infectious diseases, mental diseases or purely general hospital.

Broadly speaking, however, it may be boiled down to somewhat the following subdivisions:

### I. IMPERSONAL ASPECT:

(1) First, the *community aspect*—The truly conscientious and interested doctor is interested about the health of the community. Therefore he is bound to have a vital interest in the type of hospital in the community, the way it is managed, and the results it is able to give to the community.

(2) This might be carried a little farther to the factor of *civic responsibility*, from the standpoint of the doctor and in that aspect his relation to the hospital. The doctor's aim and ideal should be sincere interest in the hospital from the standpoint of uplifting and constructive leadership, pointing the way to a more healthy and progressive community.

(3) There is also a certain *Nationalistic aspect*, especially significant at present, which has a bearing on the relation of the doctor to the hospital.

### II. PERSONAL ASPECTS:

(1) As it is so often correctly said, the hos-

pital is the *workshop* of the doctor. However, it is no more unusual for a doctor to need or have a place to do his work than it is for a watch repairman or a garage mechanic, or any other type of artisan. Nevertheless, it must be remembered that the hospital is more than just a mere workshop. It is a place of many technical and highly specialized departments, in many instances not fully appreciated by a large number of the staff doctors. Most people and many doctors think of the hospital as a place of comfort and security for the patient, with all necessary laboratory and operative facilities. All too frequently the "behind-the-scene" factors are never thought of, or if they are emphasized, it is because of a breakdown of a temporary nature in some remote department, i.e. the laundry, the power plant, the housekeeping department or any one of the numerous unsung departments. The doctor's personal interest and relationship should be broad enough to include and appreciate the 20-25 tangible or intangible, personnel-patient contacts or, putting it another way, the  $1\frac{1}{2}$ - $1\frac{3}{4}$  employee per patient ratio. It is the proper co-ordination and function of all these departments that makes it possible for the doctors to carry on research work and properly care for their patients.

There should be a mutual challenge between the doctor and the hospital. On the one hand the hospital is endeavoring to provide laboratory facilities of the most efficient and best type, including pathological and x-ray laboratories, the best surgical and medical equipment possible, libraries, staff rooms, record librarians, and all the necessary and vital adjuncts including internes, which make for the practice of better

#### MEDICINE AND SURGERY.

The factors mentioned above make it incumbent upon the doctor to keep himself abreast of the times, medically and scientifically, and puts the responsibility of the standing of the hospital squarely on his shoulders where it rightly belongs. Of what value is a laboratory if the staff does not know how to interpret the reports? Of what value is a good system of records, file system, and excellent librarians if the doctors do not furnish adequate and accurate case histories and fail to keep up progress notes that are of value? The wise, prudent and conscientious doctor will do these things for the prevention of law suits if for no other reason.

This leads up to the subject of the doctor's conduct.

#### III. CONDUCT:

There are many types of doctors just as there are many types of lawyers and other professional folk. Briefly, we may group the doctors under the following types:

(1) The Sherman-tank type of man, whose voice will be heard through all the corridors for a distance of three-four floors. He generally is in a good humor, but his conversational tone is as quiet as that of an auctioneer's voice, and seldom soothing to his patients.

(2) There is the quiet, genteel, mousy type of doctor who cannot be heard and hardly seen.

(3) Then we have the untidy sort of man, who goes through the halls smoking a pipe or cigar, or cigarette, scattering ashes not only in the halls but in the chart rooms, over the charts and more or less around the patients' rooms, unless perchance he puts his cigar or cigarette on some convenient doorstep or in the hall and goes away and leaves it.

(4) There is the type who never has any set time for visiting the hospital and is just as apt to see them at bed-pan time, meal time, or late hours of the night. In most instances, except in cases of emergency, these visits could be arranged at a more convenient and less disturbing time for the patient and everyone concerned.

(5) The Ack-ack type of doctor, and for that matter, many other types of doctor are prone to tell jokes, some of which date back before the time of Confucius and in the telling of these jokes, they get rather loud and enthusiastic. This is sometimes rather disconcerting to the patient and time-consuming to the nurses who should be busy and have little time now to listen to old jokes. Motto: "We are always glad to see our doctors, but we have no time for idle talk or old stories. If we are not busy, we should be."

(6) One type of doctor who causes more or less confusion is the man who has imbibed a bit too freely before he decided to make hospital rounds. He is apt to be slow, inaccurate, noisy, and in other ways may make a nuisance of himself.

In a few instances, the doctor's attitude from the standpoint of loyalty or buck-passing is very bad. It is very easy by the mere shrugging of the shoulders or lifting of an eyebrow

at the wrong time, to cast some reflection on the hospital and its standards, or the type of employee. That may be a very costly thing to do and certainly is most unfair and unsportsmanlike. The real relation to the hospital from the standpoint of conduct is one of courtesy, consideration, promptness, the cultivation of a splendid pleasing personality and professional and social etiquette.

One phase of the doctor's relation to the hospital demands that he do all in his power to be professionally within the rules prescribed for etiquette, for professional ability and a sense of square dealing. Also it should be a spontaneous habit to compliment everyone in their work and sincere effort. Verbal gratitude costs little, and makes it much easier for the recipient to do the next task with a lighter heart.

A very important factor that many doctors fail to take note of is their relationship to the hospital is their attitude toward the various types of hospital personnel. A true sense of common courtesy and a sign of interest in fellow humanity will be manifested by a pleasant smile and a polite salutation to any member of the hospital staff that might ordinarily be contacted in hospital visitations—the man or woman washing the floors or corridors or the stairs will respond to a courteous greeting and will proceed with their task a bit happier for the recognition of courtesy rather than a brusque "move out of my way" attitude. Such small acts of courtesy are the cement that binds the structure called "esprit de corps" together. The elevator operator understands the words "Thank you", and the telephone operators have time to listen to a "please" and "Thank you" instead of "Why don't you sleep at home?" Remember—a pleasant smile or a cheery good morning may make the day easier for any employee, whatever his or her rank, who besides their duty of the moment may be carrying a heavy personal burden of their own at the same time. Doctors should be salesmen of optimism and good cheer.

In their relation to the hospital the doctors must know there are certain rules and regulations and that they must be enforced even though the management does do that in some cases with reluctance. A doctor should not take advantage of any unnatural situation to force an issue with the management concerning admission of patients or favor that he may wish

done. A cheerful compliance with the rules is a human responsibility seldom carried out.

#### IV. COMPLAINTS:

Doctors should realize that things will not always run smoothly, or in the way they wish them to go. At such times their tempers may be short; however, they should remember their position and the fact that their training and education have all been along the lines of calmness, clear thinking and mature judgment. A quiet dignity in times of stress, or when others are losing their tempers, is a mark of a real gentleman and a true doctor. Anything done for the hospital from the standpoint of serving on boards, committees, or teaching faculty, or donation of funds should be done with generosity and with no thought of putting some one on the "spot" for future favors. Carrying out the rules and regulations, the doctors would do well to comply with all the requirements concerning charts, signatures, and compilation of all records as soon as possible.

The monthly staff meeting is a meeting that in most cases doctors are required to attend in order to keep their standing with the hospital; however, the doctors should be glad to attend these meetings and they should be of such type that they provoke great interest and the doctors would feel that they were losing something if they did not attend. This is a relationship between the doctors, themselves, and not necessarily a hospital affair, purely.

The doctor's relationship to the hospital should include constructive help and suggestions. Styles in all phases of life are constantly changing. That is true in hospital management, hospital construction, hospital technique and all factors involved in hospital management. The hospital, by its activities and its efficiency, is a legitimate source of advertisement to the public for the benefit of the doctor. The better the hospital, the better it is run, the more efficiently it is run, the more wholesome the relationship of the doctor to the hospital, will be a great boomerang for the good of the doctors connected with any institution that is well thought of and well spoken of. The doctors can make that possible themselves by their own attitude and should bear in mind at all times that they are dealing in abnormalities. Their patients would not be in the hospital if they were normal. By the same token their friends and relatives are, likewise, in an upset

state mentally and sometimes physically, and often do not see things in their true perspective.

With these factors in mind, we have the factor of the nurses and technicians who are working directly with the patient and the effect of nervous friends upon the patient and the nurses and technicians. All these factors should be borne in mind and acted upon accordingly by the doctors.

A cheerful countenance and a spirit of buoyancy are things the patients need, and these cannot be brought to bear upon the patient if the doctor is selfish, thoughtless, rude, harsh with the nurses or inconsiderate of other people coming in contact with the patient. The doctor's relationship to the hospital—in the last analysis, is measured by the hospital's efficiency, by his attitude and co-operation with the management, including courteous treatment of the over-worked nursing staff. By that token we include the heads of departments, culminating in co-operation of the business manager and finally, the superintendent. All of the above departments are working for the interest of the entire group, not the least important of which is the doctor, and in the final analysis it is the doctor's attitude, individually and collectively, that sets the standards.

In an attempt to see both sides, I have asked the heads of the three departments in the hospital that have the most intimate contact with the doctors, for their views concerning this problem.

*From the Viewpoint of the Admitting Office Nurse:*

The lack of beds and the decrease in the number of nurses have created a very difficult position for the Admitting Office Nurse.

Hitherto, we had ample room and enough nurses to meet every call, but now with the tremendous increase in patients and few additional hospital facilities, we fall short of meeting the demand. Although we are trying to eliminate using valuable bed space for patients not in actual need of hospitalization, we must rely on the judgment and discretion of the physician in charge of the case.

The average patient realizes it is more convenient and less expensive to remain in the hospital a few additional days than to employ help for care in the home.

Employees of practically all factories and

institutions have availed themselves of group insurance and bring great pressure to bear upon their physicians in order that they be hospitalized in cases of illness, regardless of the severity.

In order that emergency cases be immediately hospitalized, it becomes the very unpleasant duty of the Admitting Office Nurse to cancel or postpone a reservation which has been made from ten to twelve days previously. In this she is wholly impersonal and unprejudiced as touching either the physician or the patient. Nevertheless it takes a very understanding physician to accept this kindly, and many times the patient feels he or his physician is being discriminated against.

Only by the knowledge of our understanding and co-operative doctors are we able to carry on with any degree of satisfaction to ourselves and credit to our hospital.

*From the Viewpoint of the Hospital Business Manager*

Unfortunately at times of illness, there is a necessity to think of the economical side of illness. We all know that it is very costly to maintain the high standards that we have set for our hospitals. The physician does not have his emotions involved at this crisis, and should advise and direct the patient in selection of his accommodations in accordance with his means. Patients during the crisis are apt to lose sight of the economical side and sometimes to order in excess of their ability to pay. The physician should remember, however, in advising some patients to take ward beds, that these beds are maintained at less than cost and should give the hospital the opportunity to recover this by advising their patients to take private rooms.

Over a period of years, both the hospital and the physician have found it sound policy to ask for a deposit in advance from incoming patients. It has been found that when a patient has been advised in advance by the doctor that a deposit will be required and payment must be made in advance, that the patient will not resent being asked for the deposit, but will be aware of the probable expense, and will feel much better toward the hospital and its charges when these things are discussed in advance.

The physician also benefits by these advance arrangements, because when these things are not clearly understood, it reflects on the physician, for he is the one who made the recommendation for that particular hospital.

*From the Viewpoint of the Hospital Administrator*

There is an axiomatic statement that "You cannot get more out of a thing than you put into it." Therefore, for a hospital to pay its bills, it must keep within its budget. Patients coming in should be made aware of the cost of their hospitalization, as far as possible, by the doctor, rather than have startling amounts thrown at them at the Admitting Office.

Then, from the other point of view, if you listen to every doctor who gives you a suggestion as to how to run your hospital, we would be buying things all the time which are used once and then not used again. This makes hospital care very expensive. Some doctors and nurses are thoughtful about the amount of cat-gut they use in surgery or linen that they use in the rooms. All of which in the added amount brings the cost of hospital care up tremendously because of wastage. Doctors ordering certain types of drugs just because they hold stock in a certain drug concern, does not make for efficiency and the low cost of care.

Imposition of one kind or another upon any department by the doctors just because they bring a lot of patients to the hospital is not good policy; and when a doctor gives that as his reason, he should be well reminded that if it were not for the hospital, a great deal of his business would not be able to be taken care of, because of the grouping of patients within the walls of the hospital. If every doctor wanted just his patient in as a charity patient, and each doctor did the same, you would soon have your hospital in bankruptcy.

Yes, doctors are our salesmen for the hospital care which we furnish. For that reason we should show them every deference possible within reason.

**SUMMARY**

Chemically speaking, the relationship of the doctor to the hospital might be termed a reversible reaction. To say that the relation must be correct is putting it mildly. It is vital, essential, and for the doctor with any spark of ambition, an absolute necessity. The hospitals, through alert nursing staffs and with their facilities for accurate and orderly filed records, their laboratories, surgeries, and x-ray laboratories, have been an indispensable aid to the doctors and without which progress would have been slow and costly. However, time is a great factor in a doctor's life. They sometimes forget that everything should be written—that is, orders for the patient, orders for the laboratory work, and notes as to the condition of the patient. One little tip—if all doctors would sign their patients' charts at the time of visit it might save many medical-legal complications.

In conclusion, next to the patient's religious counsellor, the doctor plays the most vital role in the drama of life. What preparation, what training, what specialized thought has the doctor made a part of his armamentarium to cope with their problems! In many hospitals the doctor, by a statue, a painting, a cross, a brief written message or some other token is made aware of the fact that he is in an unusual place or situation. Is this not another factor of great importance with the elements that constitute a basis for a fine and effective relationship to the hospital?

Finally, the true doctor is a sincere salesman for the facilities of the hospital and what it has to offer—a salesman for the value of the healing art, and above all should be the source of hope, cheer, encouragement, comfort and poise in all the crises of life.

727 West Seventh Street  
Los Angeles, 14, California

## AMERICAN MEDICINE TOMORROW

MAC F. CAHAL, *Exec. Sec.*  
*American College of Radiology*

IN his excellent book comparing the theories of Oswald Spengler and Raymond Pearl, "Today and Destiny", Edwin F. Dakin expresses a truism that is of particular significance for doctors in these dynamic times: "Any concept—economic, political, or cultural—which leaves its possessor wholly unprepared for to-

morrow is of doubtful validity. Conversely, men who are not surprised when the future comes, lie very close to the truth."

Doctor Lowell S. Goin, president of the American College of Radiology, was pleading for a true concept of the future when, in a recent letter to Members and Fellows of the Col-

lege, he warned of impending social changes that would almost certainly result in new methods of distribution for medical services. He urged radiologists to actively encourage voluntary prepayment plans for medical care, sponsored by medical societies, as the soundest and most desirable method among the many that have been proposed. At the same time, he warned that some form of socialized medicine, embodying compulsory health insurance, is not an inconceivable eventuality.

Doctor Goin's concern would seem to be justified by what most observers have recognized as an increasing pressure of public opinion. The attitude of the public was succinctly expressed by FORTUNE magazine in its December issue: "The state of medicine in the United States is a social problem because the country's conscience has made it so . . . people who cannot find or pay for proper medical care are resentful."

I have been sharply criticized in some quarters for a statement made in my annual report to the College two years ago in which I referred to the powerful social forces at work throughout the world and their manifestation in agitation for socialized medicine in this country. I remarked that there was a growing conviction among medical men that a head-on opposition to this unmistakable trend would be as unwise as it would be futile. Subsequent events have proved, I believe, that the demands for improvements in the distribution of medical services must be met, either by voluntary plans for prepayment or, if not, then by compulsory health insurance. It seems unnecessary to recite the extensive evidence that this is so. A half dozen public opinion surveys have revealed a definite public demand for insurance against medical costs.

Brigadier General Fred W. Rankin, in his presidential address before the American Medical Association House of Delegates last year called upon the medical profession to recognize the gathering momentum of trends that are "directed toward some form of national health service as an integral function of the state." He made a plea that they be regarded not in the light of apostasy, but rather in the light of realism.

Dr. Allan Gregg, whose words carry considerable weight in the medical world, has uttered a similar warning. "The danger for medicine

in America lies in failure to acknowledge and to study the sociologic aspects of medicine—the social matrix. We are loath to see that research and teaching, as well as the practice of medicine, will change when change comes in the prevalent interpretations of the role of government and the structure of our society," he says.

It would appear, therefore, that if we are not to be unprepared for tomorrow, we should give consideration in our deliberations to the likely effects of all the various proposals for changes in the economics of medicine. It is a poor general who fails to consider the probable results of every possible contingency that may alter the existing situation.

In our efforts to peer into the future of medical practice in the United States I think we should keep one very important point clearly in mind. It is this: Every system of compulsory health insurance in all the countries of the world has been built upon existing agencies for the distribution of medical care. On the basis of history, therefore, we can assume that, if a system of compulsory health insurance is adopted by Federal or State governments in this country, existing plans for the application of the insurance principle to payment for medical care would be utilized by the state. The obvious corollary is that medical practitioners would carry on under the state plan much as they did under the voluntary plans which preceded it. This has been almost the universal experience in European systems.

Writing on the "Origins of Health Insurance," in their excellent book on this subject Simons and Sinai show that compulsory health insurance is built out of three existing institutions: insurance or prepayment plans, the state, and the medical professions. "The relations, reactions, and relative strength of these determine much of the character and results of compulsory health insurance throughout the world leads them to conclude that pre-existent voluntary prepayment plans have dominated the state systems which followed.

Douglas and Jean Orr, in their book on the British experience with health insurance, point out that the form which the national health system of England finally took was determined by the "friendly societies" which had existed for many years as voluntary plans for prepayment to meet the costs of sickness.

Sir William Beveridge, in his epoch-making

report on social insurance in England, observes the part which the voluntary plans have played in setting the pattern of the government system. He contemplates, though with frank displeasure, that they will continue to be utilized as distributing agencies in the expanded system which will undoubtedly be adopted in Great Britain.

He implies, incidentally, as have others before him, that voluntary sickness insurance promotes, rather than deters, the adoption of compulsory systems. In 1909 David Lloyd George pointed to the "friendly societies," which were comparable to our present prepayment plans, as proof of the feasibility and desirability of compulsory sickness insurance. The National Health Insurance Act came three years later. It is significant, perhaps, that efforts to enact compulsory insurance laws in our own country are today most concentrated in the two states with the oldest and largest voluntary medical service plans, California and Michigan.

We all hope that voluntary prepayment plans, sponsored either by medical societies or commercial insurance carriers, will meet the palpable demand of the public for relief from the unpredictable financial burdens of illness. If they do not, the lessons of history teach us that organized medicine has yet another compelling reason for extending these plans as rapidly and as widely as possible. Once firmly established, they would set the pattern and determine the methods to be followed in the event a compulsory system is adopted.

Now, in the light of these considerations, the group hospitalization movement, concerning which organized medicine has been exceedingly circumspect, acquires a new importance that tends to justify medicine's diffidence. Are the Blue Cross plans to duplicate the history of England's friendly societies? Two facts lend credence to an assumption that this is altogether possible.

First, a determined effort is being made by directors of Blue Cross plans to extend their benefits to include complete surgical or medical care. Second, Blue Cross plans would almost certainly be preserved and integrated in a compulsory sickness insurance plan.

The first of these statements will be promptly denied by Blue Cross leaders. But the facts speak for themselves. In Delaware, the Blue Cross plan has already been expanded to include

cash benefits for surgical care. It is administered by a Board of Trustees on which there are two hospital representatives for every doctor. Also in West Virginia and North Carolina hospital service plans have assumed full control of medical care plans.

The American Hospital Association, at its recent annual meeting, considered recommendations from several speakers for "extending prepaid hospital plans to cover out-patient care." At the same meeting the Hospital Service Plan Commission approved a proposed model enabling act for comprehensive health service plans which would require, among other things, that any plan incorporated under the act be controlled by a board composed of one-third hospital trustees, one-third doctors, and one-third lay representatives of the public. In the course of the discussions, Mr. Louis H. Pink, president of Associated Hospital Service of New York City, urged expansion of Blue Cross to include the costs of medical care without delay.

In Philadelphia, where the medical society several years ago fought a bitter and unsuccessful battle to exclude radiology and pathology from the hospital service plan, a proposal has very recently been submitted to add complete medical care to Blue Cross benefits. The proponents candidly recommend repeal of the present Pennsylvania enabling act, which requires that a majority of the directors of medical service corporations be doctors of medicine.

Now I desire that I not be misunderstood. Cooperation between hospital service plans and medical or surgical service plans is essential. It is rather generally agreed among hospital leaders that Blue Cross enrollment has about reached its maximum unless contracts for hospital service can be coupled with insurance against medical costs. There is no doubt that the United States Public Health Service will emphasize this fact in the report of a study it is currently making of the movement. Furthermore, it is both logical and economical to delegate responsibility for sale and routine administration of the medical service plan to existing Blue Cross plans which have several years of experience and have acquired trained personnel.

But, medical societies which turn over complete control of prepaid medical care to Blue Cross plans that are controlled by hospitals are traveling a dangerous road. They are violating one of the basic principles of organized medi-

cine if they fail to establish a separate corporation to control the medical plan, with a board of directors of which at least a majority are doctors.

Ten years ago the American Medical Association laid down the postulate that: "All features of medical service in any method of medical practice should be under the control of the medical profession. No other body or individual is legally or educationally equipped to exercise such control." This principle has lost none of its validity.

If anyone is inclined to minimize the importance of this principle, he has but to follow the course of the controversy that has persisted between hospital service plans and the organized medical profession over the inclusion of certain medical services as a part of hospital care. For ten long years county, state, and national medical organizations have insistently demanded that radiology and pathology be excluded from Blue Cross benefits. Everyone knows that the reaction of hospitals to these unequivocal demands has been one of polite indifference. What makes anyone think they would follow the dictates of the medical profession concerning other branches of medicine, once they were in control of medical service plans?

Constantly during recent years the American College of Radiology has warned that medicine would sacrifice a basic principle if it yielded to the adamant demand of hospitals that they be permitted to include radiology and pathology in Blue Cross benefits as a part of hospital care. Too often our admonition that this would open the door to further encroachments by which hospitals would assume added prerogatives in the delivery of medical services, has fallen on unheeding ears. Now, as one medical editor has sardonically remarked, "The beans are on the carpet, spread out for all to see."

The second fact stated above, that Blue Cross plans would be integrated in a system of compulsory insurance, is likewise more than a mere assumption. Witness the curious tergiversation that has taken place in Rhode Island. Not long ago the governor of Rhode Island proposed a law of compulsory hospitalization insurance in his state. Promptly Blue Cross executives all over the country assailed the proposal as "un-American" and "regimentation." But, when the governor publicly announced that he con-

templated the use of Blue Cross as an agency under the system, opposition quietly died.

The Wagner-Murray-Dingell bill, as you know, authorizes the Surgeon General to "negotiate agreements . . . with private agencies or institutions . . . to utilize their services and facilities . . ." In response to a question from hospital spokesmen, Surgeon General Parran has already expressed the view that this would include Blue Cross plans.

I would point out that this provision in the bill would also permit medical service plans operated by medical societies to enter into contracts for rendering services to beneficiaries. Significant also is the provision in the Wagner bill which permits the practitioners in each area to elect the method by which payment shall be made for services.

Does this not offer sufficient reason for medical societies to set up their own plans for pre-paid medical care? Surely the leaders of medicine can see the wisdom of establishing proper precedents now.

I have attempted here to present a point of view, which I think carries profound consideration for American medicine. I have not said that voluntary plans of sickness insurance will be superseded by a compulsory system. I honestly do not believe they will be. But, as my friend, A. M. Simons has wisely said, social experiments invariably establish patterns of precedent that are seldom completely reversed. In these dynamic times we have extra reason to be vigilant.

The future faces American medicine. Precedents are being established that will have permanent influence on the system of medical practice in this country for many years to come. From the leaders of thought in organized medicine the highest order of statesmanship and sound judgment is needed.

NOTE: The above address was presented at the annual meeting of the Board of Chancellors of the American College of Radiology in Chicago, February 8, 1945.

#### THE MEDICAL QUARTER HOUR

#### "KEEP COOL"

Broadcasts on the timely subject of "Keep Cool" begin with June 25 over KTAR, Phoenix. The time is: Each Monday at 6:15 P. M. Invite your patients to listen.

# ARIZONA MEDICINE

*Journal of*

ARIZONA STATE MEDICAL ASSOCIATION

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## Editorials

### Current Topics of Discussion

The problems of medical economics are mere spectres in the minds of most of the profession. This fact was very obvious when these subjects were discussed at the recent annual meeting of the House of Delegates at Tucson. Such a situation is readily explained at this time. Under present conditions, where people's pockets are bulging with money, there are no economic problems. Our busy profession who find any time to read must devote it to subjects of medicine, and articles or discussion on economics fail to attract the slightest attention. But it requires no prophet to warn us that these same old problems will plague us again when the country returns to peace.

The officers of the state association and the Council meet several times a year. They understand what these problems include. The House of Delegates have these problems discussed for a couple of hours at the yearly meeting, and then the matter is folded up for another year. The rank and file of the profession scarcely give the matter a passing thought.

Generally speaking, the following problems arise: 1. What is the Blue Cross organization? 2. Why is a Medical Service Plan to be organized by the State Association? 3. What is the Committee on Physical Fitness?

To begin with, the members of the American Medical Association have endorsed the principles of voluntary, pre-paid, non-profit health insurance, and through its various organizations have offered it and are promoting it as our

main answer to the demand for compulsory, Federal or State Medicine.

Three polls on public opinion have been conducted. The National Physicians' Committee has conducted a national poll, and the states of California and Michigan have conducted polls in their respective states. Through these polls it has been determined that 65% of those interrogated thought something should be done to make it easier for people to pay their hospital and doctor bills. Statistics have been arrived at which indicate that about 90% of people are capable of meeting the expense of ordinary office calls. It is catastrophic illness that needs solution, where hospitalization is required.

#### *The Blue Cross*

There are over 80 Blue Cross organizations in North America. They are all non-profit. Their principle is to keep operating expenses below 15% of money collected, and turn back at least 85% in benefits to subscribers. Their subscribers must be enrolled in groups, with premiums collected in pay-roll deductions. In this manner, a business firm collects all the money and sends it direct to the Blue Cross office. Most of the bookkeeping is done by the firms enrolled and in this manner the Blue Cross organization is able to keep down its overhead. It is impossible to take on single subscribers.

The Arizona Blue Cross Hospital Service has been in operation since last November. It already has over 10,000 subscribers. It is under the able management of Mr. L. Donald Lau, executive director. Its rates are 85¢ a month for a single person and \$2.00 for a family regardless of size for those who are dependent on the subscriber. It provides 30 days hospitalization out of each calendar year for each member of the family and includes routine laboratory work.

#### *Medical Service Plans*

Medical Service Plans are in operation, or in the process of operation, in about 20 states in the Union. They are organized and operated directly by the state medical societies of the various states. They are operated very similar to the Blue Cross and, in many instances, in conjunction with them. Subscribers are enrolled in groups with the premiums collected by pay-roll deduction. Subscribers must be within certain maximum incomes, usually below

\$2,500 a year. The rates are about the same as the Blue Cross rates. Fee schedules are set up for the services rendered and are paid directly to the physician—very similar to the method of the Industrial Commission in this state. The simplest plan is to start out and cover surgical and obstetrical care in hospitals only. After the plan is well established, the benefits may be widened to include other services. If we have a Blue Cross Plan and a Medical Service Plan working together we have solved the so-called catastrophic illness, which 65% of our people feel should be done. The cost of this would be about \$50 a year per family, or roughly a dollar a week. To a nation which is supposed to be becoming Security minded, this would not seem an excessive amount.

Eric Johnston, President of the United States Chamber of Commerce, sounded a warning to the medical profession recently when discussing voluntary, pre-paid, non-profit health insurance. He said: "Even if this procedure is sound in principle, the medical profession will have to sell it to the public, or the politicians will come along and sell them state medicine."

There has been a great deal of buck passing coming from all parts of the profession as to who should do something about stopping socialized medicine. From the present interest in Blue Cross and Medical Service plan, it would seem that if everyone wishes to do his bit, he should follow Mr. Johnston's advice above.

#### *The Committee on Physical Fitness*

This was another subject which was new to the House of Delegates at the Annual Meeting of the same. Practically every one does know that after the Selective Service completed their first physical examinations on men in this nation between the ages of 18 and 45, they found over four million men unfit for military duty. This is known as Colonel Rountree's Report. It caused considerable furor among those who take upon themselves the task of doing the thinking for the nation. In order to do something about it, the late President Roosevelt appointed a National Committee on Physical Fitness in April of 1943. This committee realized the need for the support of the medical profession, hence with the cooperation of the American Medical Association, a joint Committee on Physical Fitness was formed. This joint committee has asked the Governors of the various states to

set up state committees on Physical Fitness. None as yet has been set up in Arizona. This work is practically all in the blue print stage so far, as it is intended for a vast post-war program. The Office of Defense Transportation has, so far, prevented the holding of meetings necessary to perfect the organization.

Briefly, it is the plan of the Physical Fitness program to reach into local communities all over the country. The program is to be educational and instructive in all matters of public health. It is the plan to provide all types of facilities, including apparatus, for physical training and athletics, and to encourage every person in the nation to participate fully. Its possibilities are visionary but tremendous if fulfilled.

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#### Fees

Paul Hoffman, President of the Studebaker Corporation, and Chairman of the Committee on Economic Planning, says, "Judging solely from what I have read, there is a problem (of high costs) which has not been fully met. . . With reduction of national income, in order to maintain automobile volume, we had to bring down both the original cost and the upkeep of our cars. Many millions of dollars were spent in market research on this problem. . . I raise the question as to whether the medical profession has made a similar survey to find out what type of service the average person requires and what he can afford to pay for it. I raise the question whether you have applied your fine professional brains to the challenge of every item of the cost of medication, including hospitalization, to make certain that you are giving the customer the best break you can for his dollar. These questions come to my mind because of my confidence that better answers can be found for them by private than by socialized medicine. If there is anything at all to the questions, I urge quick action because, if the battle for freedom is lost on the medical front, our fight to preserve free enterprise in business will be that much harder. . ."

Here is the key to the growing demand for radical change in methods of distribution of medical services. The medical profession has not, with few exceptions, accepted this challenge. The challenge is principally to the individual physician, and must be faced by each one in his

own contact with the public. Medical fees will always be thought by some to be excessive, and in point of fact they are sometimes excessive. In war times each physician is faced with the necessity for limiting his practice. There are two methods of doing this: first, the appointment method; and second, the elevation of fees.

In these times no physician is justified in using the second method. His popularity is not based on his skill or his training alone, but on the scarcity of physicians. To charge excessive fees now would be a violation of the faith of the men who have gone into the armed services. Now, with the increased volume, would be the time to reduce fees. A degree of altruism must continue to be part of the physician's code. Let the cynic take heed. The entire medical profession and the public will suffer for the failure of the few.

H. R.

## In Memoriam



**Harlan Page Mills**  
**PATHOLOGIST. (1873-1945)**

With the passing of Dr. Harlan Page Mills, of Phoenix, on February 27th, at the age of seventy-two years, the pioneer pathologist in

Arizona laid down his work and went to his reward. For thirty years he had served the profession of this state, developing the specialty of clinical and tissue pathology from nothing, so far as Arizona was concerned, when he took up his work among us, to a commanding place in the medical achievements of the state.

In 1914, Dr. A. C. Kingsley, then superintendent of the Arizona State Hospital, realizing the need for a more highly developed medical service to those patients, invited Dr. Mills, who was then pathologist for the Missouri State Hospital at St. Joseph, Mo., to become pathologist and assistant psychiatrist at the Arizona institution. This invitation was accepted and Dr. Mills served in the capacity mentioned from 1914 to 1917, with one brief interruption due to political shifts in the state government. In that interval he practiced for a year at Lamanda Park, Calif. Shortly after his return to Arizona in 1917 he was induced to become associated with the Pathological Laboratory, then a young and struggling venture in medical life of the state. His work in and with that organization and its affiliation with the two general hospitals in Phoenix, along with St. Luke's Home, made up the circle of activities in which Dr. Mills spent the remainder of his professional life.

Dr. Mills was born at Isadora, Mo., one of a family of seven brothers. He grew up and secured his premedical education in the schools of that vicinity. He graduated in medicine in 1902 from the Marion Sims-Beaumont Medical College, afterwards the St. Louis University School of Medicine. He served his internship at the Ensworth Hospital, St. Joseph, Mo., where he met Miss Maude E. Benton who was a nurse at that institution. They were married on October 14, 1903, and located at Sheridan, Mo., where Dr. Mills engaged in general practice for several years, and where his two sons were born. For about one year he was associated in practice with his brother (Dr. O. P. Mills) at Grant City, Mo. His bent toward pathology was manifest by this time as shown by one paper produced while at Grant City (Leukemia, with report of case, March, 1909). In 1909, he accepted the position of assistant physician at the Missouri State Hospital No. 2, at St. Joseph, and was later advanced to pathologist, in which position he served until moving to

Phoenix. During this time, in conjunction with another member of the staff, he published the report of a remarkable case which gained wide publicity as "a human hardware store." (J. A. M. A., Jan. 21, 1911; this patient, a woman, was found at necropsy to have 1446 different articles of hardware in her stomach, teaspoons, dozens of nails, tacks, pins, and so forth.)

Shortly after becoming associated with the Pathological Laboratory, Dr. Mills started clinical laboratory work at St. Joseph's Hospital in Phoenix, at first bringing all specimens to his office, and later doing the examinations in the hospital with his own microscope which he carried back and forth. From this humble start, the laboratory department of this hospital expanded until it reached such proportions that a full time pathologist was required to direct it. The same development took place at the Good Samaritan Hospital,—then the Arizona Deaconess Hospital,—where clinical laboratory work was started on a shoe-string and developed through the years until it, too, required the services of a full-time clinical pathologist. Dr. Mills was made consulting pathologist for each institution upon his retirement from active direction of their pathologic departments. He was also made an honorary member of each hospital staff, in recognition of his more than twenty-five years of service as head of their respective departments.

Dr. Mills lost his first wife from pneumonia in April, 1924. In 1926 he married Mrs. Landonia Thompson, of Phoenix, who survives him. The two sons of his first marriage also survive, along with four grandchildren. The sons are Clarence B. Mills of Phoenix and Roscoe Mills of Dayton, Ohio.

The family was associated with the First Methodist Church of Phoenix, where his quiet, faithful attendance and wise counsel marked him as one of their leading members. He was chairman of their official board for several years. He was a member of the Kiwanis Club, the Arizona Club and the Chamber of Commerce. Outside of his professional work, his interest was in quiet cultural pursuits, his home with its flowers and shrubbery, music and reading and a citrus grove in which he took considerable pride.

He held membership in the Maricopa Coun-

ty Medical Society of which he was president in 1920, the Arizona Medical Association, Southwestern Medical Association, fellow of the American Medical Association, member of the Radiological Society of North America in which he held the office of counselor for Arizona for many years, a Fellow of the American College of Physicians. He was a diplomate of the American Board of Pathology. Dr. Mills trained himself in radiology and was known almost as well in that specialty as in pathology. He suffered injuries to his hands from his x-ray work, these giving him much trouble in his later years. He was not a prolific writer of medical articles, but did write or collaborate in producing some eighteen or more published articles listed below. These articles reflect his interest in the unusual, his careful study of useful clinical laboratory procedures, or his collaboration with other workers.

His physical disability was cardiovascular, arising from an arteriosclerosis of obliterating type. Symptoms of arterial closure of blood vessels had given warning several times during past years of what might occur should similar lesions develop in vital areas. He had suffered a sudden attack of Menier's disease with resulting deafness some years ago; later a sudden paralysis of the left diaphragm developed; arteries in one or more fingers closed causing painful Buerger's syndromes. A finger was amputated and histologic study revealed the characteristic endarteritis obliterans. Doubtless similar arterial occlusions brought on the final fatal illness, which culminated in decompensation and pulmonary edema.

Dr. Mills won the respect of his wide circle of friends. This respect grew into an abiding affection on the part of those who were closely associated with him in professional work or social contacts. Through the years his poise and courtesy, his consideration for others, his attention to detail and his excellent judgment in his work, his cultural appreciation of music, art and literature, marked him as a Christian gentleman, a scientist of no mean achievement, a sympathetic friend, as well as a loving father and husband. A void is left which will remain, as we mourn the passing from further visible contact of a friend and co-worker.

W. W. W.

**MEDICAL ARTICLES BY DR. MILLS  
AS AUTHOR OR CO-AUTHOR**

Leukemia, with report of a case (with O. P. Mills.) Medical Herald, St. Joseph, Mo., March, 1909.

Foreign Material in the Stomach (A human hardware store). (with Vandiver.) Jour. A.M.A., Jan. 21, 1911.

Pellagra. Jour. A.M.A., March 22, 1913.

Syphilis of Nervous System. Ariz. Med. Jour., Oct., 1915.

Laboratory Study of Cerebro-spinal Fluids. Southwest. Med., April, 1919.

Pathologic Diagnosis of Diseases of the Appendix. Southwest. Med., Dec., 1920.

Limitis Plastica. (with E. P. Palmer and Watkins). Surg., Gyn. and Obs., Sept., 1921.

Familial Muscular Dystrophy, case reports. (with Haines and Sessions). Arch. Neur. & Psych., Jan., 1924.

Causes of Death in Burns. Southwest. Med., March, 1925.

-ray Shadows of Secondary Infection in Lung Tuberculosis, (with Watkins). Radiology, Mch., 1925, also Southwest. Med., Mch., 1926.

Hospital Organization, — laboratory service. Southwest. Med., Mch., 1926.

Pathology of Acute Appendicitis. Southwest. Med., Feb., 1927.

Localization of Foreign Bodies in or About the Eyes. (with Watkins) Radiology, April, 1927; also Southwest. Med., Nov., 1927.

Chronic Appendicitis,—pathology and x-ray diagnosis. Southwest. Med., Dec., 1927.

Endothelioma Involving Waldeyer's Ring. (with McLoone). Southwest. Med., Sept., 1928.

Routine Cholecystography (625 cases). (with Watkins). Radiology, Aug., 1928.

Nephritis. Southwest. Med., April, 1930.

Cerebrospinal Meningococcic Meningitis,—specific treatment. Southwest. Med., Dec., 1931.

The Neutrophile Leucocyte. Southwest. Med., Aug., 1932.

of America; St. Monica's Hospital, Arizona Brewery; Marana Army Air Field; Tucson Medical Center and Western Farm Management Co. Those having from fifty to a hundred participants are: Arizona State College; Peterson, Brooks, Steiner & Wist, Phoenix; Tempe Grammar School; Good Samaritan Hospital; Creighton School; J. C. Penney, Tucson; Madison School; Pullman Company, Tucson; Osborn School; St. Monica's Nurses; Grabe Electric Company; Mesa High School; Tucson Title & Insurance Co.; Martin Drug Co.; District No. 2 Arizona State Nurses; Mesa Grammar School; Maricopa County Welfare Board; and North Phoenix High School. In addition to the above there are 57 groups having 25 to 50 participants and 53 groups having 5 to 25 participants. These groups represent all types of employment and incomes range from that of a store clerk to a bank president.

Our financial experience has been excellent as compared to the first six months operation of other Plans. The initial capital supplied this Plan has been repaid and it is now entirely self-supporting at the end of this short period of operation. The April statement shows payments to hospitals to April 30 to be over \$6900. For the month of April alone, 58% of our income was allocated to hospital payments. The administrative expense was 32% of earned income and 10% was distributed to contingency, hospitalization and operating reserve funds.

The national financial experience for 1944 reported 77% of earned income for hospitalization, 13% for administrative expense and 10% going into reserves. Blue Cross standards require a new plan to confine administrative expense to 30% the first year and reduce this monthly until at the end of three years it will be 15% of earned income or less.

Prospects for the future can be judged by our large initial enrollment, our financial experience, and the ever increasing number of requests for information. The number of queries from all parts of the state are increasing daily from employed groups, schools, clubs and associations, who are requesting our field representatives to explain the plan to them. The splendid cooperation we have had from hospitals, members of the medical profession and civic leaders has been of incalculable aid in extending this Arizona Blue Cross Plan.

## Blue Cross Progress In Arizona

L. DONALD LAU, Executive Director

In 1937 Blue Cross Plans had 534,745 participants enrolled nationally. Today there are over 18,000,000 participants who have enrolled voluntarily in the 84 Blue Cross Plans which now provide nationwide coverage. This rapid growth in less than nine years definitely seems to indicate that Blue Cross has matured and can no longer be considered as an experiment.

Arizona Blue Cross, in the first six months of operation, has enrolled over 10,000 participants, indicating that prepaid hospital service is filling a great need in Arizona and that there is a definite and active demand for this service.

Of the 122 groups enrolled to date, those having over a hundred participants are: Arizona Industrial Commission; Southern Arizona Bank; J. C. Penney Co. of Phoenix; St. Joseph's Hospital; Poston War Relocation Center; Tucson School Teachers; State O. P. A.; Aluminum Co.

### UNITED PUBLIC HEALTH LEAGUE DIRECTORS MEET

Directors of the United Public Health League held their annual meeting in Salt Lake City on March 17, with directors present or represented from Arizona, California, Colorado, Idaho and Utah. (Director J. L. Robinson of Nevada was snowed in and could not fly to the meeting.) Also present as invited guests were the members of the Council of the Utah State Medical Association. Dr. Jess Hamer of Phoenix attended.

Chairman Murray presented Mr. James J. Boyle, Washington, D. C. Representative of the League, who reported on the Washington situation. Highlight of his report was the fact that the trend for social legislation in Washington seems to have passed its peak and started down-hill. Major emphasis is now on winning the war, with social problems left for later consideration. Directors approved his report and instructed him to support several pieces of pending legislation, particularly the deferment of medical students and the creation of a cabinet post for a Secretary of Public Health.

Directors of the League offered many suggestions for extending the scope of activities and adopted a resolution to request the official participation of other Western States in the League. These States include, Oregon, Washington, Montana, New Mexico, Wyoming, Kansas and Nebraska. Doctor R. F. Peterson, Secretary of the Montana State Medical Association, attended the meeting as an observer.

Election of directors resulted in the re-election of all directors except Doctor George Linnenfelter of Colorado, who retired because of poor health. Doctor Bradford Murphey of Denver was unanimously elected to succeed him. Mr. Boyle continues as Washington Representative, with the cooperation of Mr. Ben H. Read and John Hunton continues as Executive Sec-

J. D. H.

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### HEADQUARTERS PANAMA CANAL DEPARTMENT

Office of the Department Public Relations  
Officer

Success of the fight against venereal disease among the troops of the Panama Canal Department is reflected in the annual report for 1944 recently issued by Col. Wesley C. Cox, Depart-

ment Surgeon and Venereal Disease Control Officer, which shows a new low rate of 2.09 per cent. This rate is less than one-half of the previous annual low of 4.27 established in 1943 and considerably under one-third of the 6.6 per cent recorded in 1940, the first year in which large-scale control campaigns became necessary. Contributing to the 1944 record low was a rate of 1.4 per cent attained in the final month of the year.

Reports for the first two months of the present year show a still further decline to a rate of 1.8 per cent, which gives Army venereal disease control officers a basis for setting the goal for 1945 at two per cent or less.

Contributing to this favorable average, which is substantially lower than that for the continental U. S., is the cooperation between Army and Republic of Panama health officers in a thorough program which eliminates sources of infection.

Starting with Brig. Gen. Henry C. Dooling, Chief Health Officer, The Panama Canal, and Surgeon, Caribbean Defense Command, who acts as liaison officer between the Army and the civil authorities, the campaign is carried on under the direct supervision of Col. Cox. Medical officers of the Sixth Air Force, Panama Mobile Force and Security Command, Coast Artillery Command, and Department overhead units in turn direct the work in their own organizations with the assistance of officers and non-commissioned officers down through the corporal of the squad.

In addition to its organized program of instruction and indoctrination of troops, the Army employs the private physician and patient relationship in cases of military personnel whose records show frequent exposure to potential sources of infection. Such individuals receive direct counsel from their respective medical officers, all of whom use a sympathetic approach in pointing out the deleterious effects of venereal disease upon the mental and physical faculties.

Control of venereal disease is made a responsibility of command under the Army program. Commanding officers down to the lowest grades are charged with getting across to their troops the Department Surgeon's slogan, "A clean and healthy body is but a small contribution to our country in this time of need."

The need for and value of moral cleanliness is impressed on the troops through periodic lectures and photographic displays with emphasis on reaching each individual directly. Causes and effects of venereal disease are vividly explained through the media of informal talks, demonstrations and clinical exhibits. The necessity of chemical cleanliness is especially stressed whenever moral cleanliness fails. Supporting the entire program is an extensive schedule of recreational activities and educational facilities provided by the Army to occupy the off-duty time of troops.

Cooperation by the Republic of Panama is under the direction of Dr. Guillermo Paredes, Director of Public Health, who works in liaison with Gen. Dooling in locating suspected sources of infection, and provides for examination and treatment of infected women, both in the Interior and in the terminal cities. Dr. Forrest E. Brown is Venereal Disease Control Officer on Gen. Dooling's staff while Dr. Sidney B. Clark works directly with Dr. Paredes.

Infected women are located through the routine reports required by the Army from military personnel applying for treatment. From the descriptions and personal data shown on these reports, the Army and Republic health officers are able to locate diseased women promptly and to place them under treatment. Clinics are established in the Interior where the women are kept in custody until treatments are completed. The republic also maintains clinics in the principal cities of Colon and Panama together with the National Institute for the Control of Venereal Disease among Women. In addition, the government officials promote a system of education and control over the morals of the Republic's youth.

#### HOW TO GET MEDICAL RECORDS OF DISCHARGED VETERANS

Obviously, those who are being discharged from the armed forces and who are returning to civilian pursuits will at some time or other seek the advice of or treatment from physicians in civilian practice. In handling such cases, the civilian practitioner will be handicapped without a health and medical history of the person while he was in military service. Review of case histories is a fundamental requirement of good practice.

"What can I do in such cases?" the attending physician asks.

Here is the answer.

The War Department has issued a regulation (No. 40-590) authorizing the commanding officer of any hospital where a member of the armed forces may have received treatment to release information from his or her medical record to "registered civilian physicians, on request of the individual or his legal representative, when required in connection with the treatment of the member or former member of the armed forces." It is stipulated that it is expected that the information given will be treated as confidential, as is customary in civilian medical practice.

It probably is safe to assume that the Navy Department and the Veterans Administration will co-operate in similar fashion.

Therefore, in dealing with the ex-servicemen and -women, the attending physician should explain to them the need for this information, how it may be obtained, and suggest that the record be secured for his review so he will be better equipped to offer good advice and competent treatment. By doing so the physician will be benefiting the ex-servicemen or -woman as well as himself.—Ohio State M. J. Nov., 1944.

#### RISK OF INFANTILE PARALYSIS NO GREATER IN ARMY THAN IN CIVILIAN LIFE

Despite the huge concentration of men brought together from all parts of the country in Army posts and the combat conditions under which great numbers are living, there is apparently no more danger in the Army from infantile paralysis than there is in civilian life.

The Office of The Surgeon General reports that the number of cases was 3.4 per 100,000 troops in this country in 1943 and 4.0 in 1944. The case fatality rate was 12.1% in 1943. This is similar to the civilian rate for similar ages, and there is a further similarity in the time of year the cases occurred and their geographical location.

There has not been an epidemic of infantile paralysis at any Army post during this war.

#### THE SCHOOL-CHILD'S BREAKFAST

Many a child is scolded for dullness when he should be treated for undernourishment. In hundreds of homes a "continental" breakfast of a roll and coffee is the rule. If, day after day, a child breaks the night's fast of twelve hours on this scant fare, small wonder that he is listless, nervous, or stupid at school. A happy solution to the problem is Pablum. Pablum furnishes protective factors especially needed by the school-child—especially calcium, iron and vitamin B complex. The ease with which Pablum can be prepared enlists the mother's cooperation in serving a nutritious breakfast.

MEAD JOHNSON & COMPANY,  
EVANSVILLE, INDIANA, U.S.A.

## ORGANIZATION SECTION

DAN L. MAHONEY, M. D., President

### Directory

#### ARIZONA STATE MEDICAL ASSOCIATION Organized 1892

423 HEARD BUILDING, PHOENIX, ARIZONA

##### OFFICERS AND COUNCIL

|                                  |          |
|----------------------------------|----------|
| Charles P. Austin, M. D. (1949)  | Morenci  |
| President                        |          |
| George O. Bassett, M. D. (1950)  | Prescott |
| President-Elect                  |          |
| John W. Pennington, M. D. (1948) | Phoenix  |
| Vice-President                   |          |
| Frank J. Milloy, M. D. (1946)    | Phoenix  |
| Secretary                        |          |
| C. E. Yount, M. D. (1946)        | Prescott |
| Treasurer                        |          |
| F. W. Butler, M. D. (1946)       | Safford  |
| Speaker of the House             |          |
| Jesse D. Hamer, M. D. (1946)     | Phoenix  |
| Delegate to A. M. A.             |          |
| D. F. Harbridge, M. D. (1945)    | Phoenix  |
| Chairman, Medical Defense        |          |
| District Councilors              |          |
| Robert S. Flinn, M. D. (1947)    | Phoenix  |
| Central District                 |          |
| A. C. Carlson, M. D. (1946)      | Jerome   |
| Northern District                |          |
| Hal W. Rice, M. D. (1948)        | Bisbee   |
| Southern District                |          |
| Councilors-at-Large              |          |
| Dan L. Mahoney, M. D. (1948)     | Tucson   |
| O. E. Utzinger, M. D. (1947)     | Ray      |
| E. Payne Palmer, M. D. (1946)    | Phoenix  |

##### COMMITTEES\*

###### Scientific

**Cancer Control**—A. L. Lindberg (1947), Tucson; E. Payne Palmer (1945), Phoenix; M. G. Wright (1945), Winslow, and J. N. Stratton (1946), Safford.

**History and Obituaries**—Hal W. Rice, Historian, Bisbee; Donald F. Hill, Tucson, Frank J. Milloy, Phoenix.

**Industrial Health**—John D. Hamer (1947), Tijer; Chas. B. Huestis (1946), Hayden; E. M. Hayden (1945), Tucson.

**Maternal and Child Health**—L. C. McVay (1947), Phoenix; Howard C. James (1945), Tucson; W. P. Sherrill (1946), Phoenix.

**Orthopedics**—Geo. L. Dixon (1947), Tucson; E. W. Adamson (1946), Douglas; James Lytton-Smith (1945), Phoenix.

**Scientific Assembly**—Charles P. Austin President-elect and Chairman (1949); Morenci; Carl H. Gans (1947), Bisbee; G. F. Manning (1946), Flagstaff; R. W. Rudolph, Host Society (1945), Tucson; Frank J. Milloy (1945), Phoenix.

**Scientific Education and Postgraduate Activities**—A. H. Dysertkeft (1946), McNary; A. I. Podolsky (1947), Yuma; Florence B. Yount (1945), Prescott; Chas. S. Kibler (1945) Tucson.

**Syphilis and Social Diseases**—L. H. Howard (1947), Tucson; L. G. Jekel (1946), Phoenix; George O. Bassett, (1945), Prescott.

**Tuberculosis Control**—James H. Allen (1947), Prescott; Samuel H. Watson (1946), Tucson; E. W. Phillips (1945), Phoenix.

###### Non-Scientific

**Auxiliary Advisory**—Geo. R. Barfoot (1947), Phoenix; W. Claude Davis (1946), Tucson; Florence B. Yount (1945), Prescott.

**Editing and Publishing**—Jesse D. Hamer (1948), Chairman, Phoenix; A. L. Lindberg (1946), Tucson; Walter Braze (1947), Kingman.

**Industrial Relations**—Meade Clyne, Tucson; James Lytton-Smith, Phoenix; A. C. Carlson, Jerome; O. E. Utzinger, Ray; John W. Pennington, Phoenix; C. E. Yount, Prescott; Frank J. Milloy, Secretary to Committee.

**Medical Defense**—D. F. Harbridge, Chairman (1945), Phoenix; A. C. Carlson (1946), Jerome; John W. Pennington (1947), Phoenix.

**Medical Economics**—C. E. Patterson (1946), Tucson; Meade Clyne (1945), Tucson; Robert S. Flinn (1947), Phoenix.

**Public Health Education**—H. L. McMartin (1947), Phoenix; J. S. Gonzalez (1946), Nogales; Paul H. Case (1945), Phoenix; Geo. O. Bassett (1945), Prescott.

**Public Policy and Legislation**—Charles A. Thomas (1947), Tucson; Walter Braze (1946), Kingman; Jesse D. Hamer (1945), Phoenix.

**State Health Relations**—Louis G. Jekel (1947) Phoenix; E. Henry Running (1946), Phoenix; Donald F. Hill (1945), Tucson.

\* Terms expiring in 1945 will hold until 1946.

### President's Message

At this time I shall give you a brief outline of such program and policy as I have in mind for the coming year.

First, all policies and programs are in reality those of the Council as a careful reading of our By-laws will show. The officers and all committees lay their programs before the Council for its approval, and the Council, in turn, asks the recommendations and support of the House on any program not designated to the Council alone. Your president is the guiding hand, during his administration, to see that the programs and policies of the Council and House are fulfilled. That shall be my duty—to follow the bidding of the Council and the House.

Second, our Association is not a one-man leadership organization but one of a fourteen-way direction, as there are that number on our Council. It has been the custom of Councils, at the recommendation of the President who has the responsibility of nominating members to service on the scientific committees, that our seventeen committees be representative of our entire fourteen counties. This brings our entire membership into representation on the board of officers and counties. It has also been the policy, from my observation for the Council to be representative of our three districts and that is also as it should be with smaller counties represented along with the larger ones.

Thus I would say, that our policies have been and will continue to be based on the direction of the entire membership through these officers and committees.

For the year ahead, our business in Annual Session points the way. Our main business items will be: 1. The formulation of a possible Medical Service Plan for Arizona with the Committee on Medical Economics directing the discussion as based on their recent studies; 2. Legislative matters to be presented by the Commit-

tee on Public Policy and Legislation. Incidental matters may also arise. If there is time I would like to see our membership keep up with their scientific studies. With the scientific session of the Annual Meeting discarded this year by Washington edict even though our program would have been of postgraduate nature dealing with war-borne diseases and presented by instructors from the Baylor University College of Medicine — I feel we should devise some ways and means for exchanging scientific meetings among our various county medical societies or something of the sort for scientific refreshment. This could be laid before the Committee on Scientific Education and Postgraduate activities to work out for us early in the year. 3. A Public Health Education Program is in force and will be expanded.

The committees concerned presented their recommendations which were adopted by the

Council and House and which are printed in this Journal for your information

I am told that every county society responded to the fullest measure when called on to aid during the legislative session just closed. This is as it should be and we may feel proud indeed that such interest is evoked by all of our groups.

Let us work to the end that we shall always have a full participation in all of our activities by all of our members through all of our county societies. In that way we may bring to the people in all sections of this state a full measure of medicine at its best, privately practiced and professionally administered through our Association.

Fraternally,

President.

## REPORTS OF OFFICERS AND COMMITTEES OFFICERS

### *Report of the President*

During this term as President, it has been my custom to publish the "President's Message" in Arizona Medicine beginning with the November, 1944, issue. Prior to that, the President's address was published in the May issue, and the report of the Council for its July meeting in the July issue. The Address and the subsequent messages cover the activities and recommendation of the President. They are included with this report for filing with these Minutes.

As to committee activities, I would like to state that all committees will not have reports for this session, due to the fact that some have not been active. This has been due to no fault of their own, as these committees are set up to serve the various departments of the state government who have not called on them for advice or assistance during the year. I refer to such committees as those on: Syphilis and Social Diseases, Tuberculosis Control, and State Health Relations. Attention of all state departments was called to these committees and we were assured that they would be called on during the year for advice and assistance in their respective fields. Such has not been the case. In addition, the Seventeenth Legislature was given a special printed sheet of all Association committees, with a message to the legislature that these

committees would be pleased to assist in any legislative on related health matters. Again the association committees were not called upon even though there was legislation on which none but physicians could be well enough informed to advise as to the medical aspects of the same. I refer especially to legislation having to do with expansion of tuberculosis facilities—which was not enacted but which may come up again for legislative consideration.

Ways and means should be found for bringing these committees more forcibly to the attention of the various state bodies concerned with medical problems. Letters to such heads have brought replies but no action.

As president, I made one trip to Phoenix during the legislative session and interviewed some of our legislators and, with the Committee, took a look into matters to see what more the Association could do or should do in regards to the legislation we were sponsoring. I wish to take this opportunity for congratulating the Committee on its effective work during this past legislative session.

I wish also to thank the members of the Council for their diligent attention to duty as a 100% attendance at all Council meetings is always the order of the day unless a member chances to be ill or out of the state. That has seldom occurred.

I urge your attention to committees reporting here today as a considerable program of expansion is to be proposed thereby.

Respectfully submitted

DAN L. MAHONEY M. D.

*Report of President-Elect*

The chief responsibility of the President-Elect is to head the Committee on Scientific Assembly which provides the program for the scientific sessions of the Annual Meeting.

Our Committee recommended to the Council, and the Council approved, that we follow last year's procedure and invite a group of instructors from a not too distant first class medical college to present the program for us. An invitation was extended to Baylor University and they accepted and outlined what we considered an excellent program. You saw the tentative outline of the program in various issues of the Journal.

As we were all prepared for putting the final touches to the program, the Office of Defense Transportation clamped down on meetings, with over 50 in attendance, unless such meeting was in the war effort. The Council voted to petition ODT for permission to hold the meeting as we felt the meeting *was* in the war effort since the papers to be presented were largely on war-born diseases. Nevertheless, the ODT denied the request.

We are pleased to report that our efforts were not entirely in vain, as the group of instructors proved themselves to be true professional men by supplying us with the papers they had planned to present. Hence in the ensuing issues of the Journal you will read four excellent papers which you have heard at this meeting had the scientific session and the larger attendance been permissible.

It has been my pleasure to have attended all meetings of the Council during the year and to have given some assistance to the Committee on Public Policy and Legislation with key men from our district. Others have done as much, and it is the united effort that counts.

Respectfully submitted,

CHARLES P. AUSTIN, M. D.

*Report of Vice President*

The Vice-President of the Association has little to do of an official nature unless the Presi-

dent should be absent from the state or become incapacitated. Fortunately this has not been the case, so the Vice President has rested on his oars while the President has mapped out the course.

As an officer, I have attended the sessions of the Council and have enjoyed this mutual participation in the activities of this association. I regret, along with the membership, the fact that we can not have a scientific program this year for I have always fully enjoyed and appreciated this annual scientific refreshment. We do, however, have full programs for the consideration of the Council and House and we should thereby also be refreshed and brought to the realization of the high aims of organized medicine and the medical profession as such.

Respectfully submitted,

WALTER BRAZIE, M. D.

*Report of the Secretary*

The Secretary of the Association begs to report that he has attended each meeting of the Council since the last Annual session and that he also attended the conference of Secretaries and Editors of state associations as held by the American Medical Association at Chicago each November.

The report on the Chicago session of secretaries and editors was published in Arizona Medicine and will be appended hereto for the purpose of filing with the Minutes.

The routine duties of the secretary, collection of annual dues, compilation of membership roster, and the like, are dispatched through the medium of the central office. That office serves as a "buffer" for the secretary, as well as for other officers and committees, by attention to details which, as practicing physicians, we have little time for these crowded days. That office keeps us fully informed as to activities, out of routine nature as well as those of routine.

Under the head of New Business, I shall take up certain points raised at the Chicago conference, and brought to my attention since then, on Post War Medical Activities. I shall not repeat here my report on that conference but have it here for reference if you wish to hear any part of it at this time.

Respectfully submitted

FRANK J. MILLOY, M. D.

*Secretary*

*Report of the Treasurer—Summarized*

|   |                    |
|---|--------------------|
| TOTAL CASH - GENERAL FUND .....                 | \$ 8,036.67        |
| TOTAL CASH - MEDICAL DEFENSE FUND .....         | 4,345.68           |
| <hr/>   |                    |
| TOTAL CASH ON HAND .....                        | <u>12,382.35</u>   |
| CASH - Bank of Arizona .....                    | 8,036.67           |
| General Fund .....                              | 2,773.95 10,810.62 |
| CASH - Yavapai Savings Bank .....               | 1,571.73           |
| Medical Defense Fund .....                      |                    |
| TOTAL CASH ON HAND .....                        | <u>12,382.35</u>   |
| INVESTMENTS - U. S. Defense Bonds .....         |                    |
| Medical Defense Fund .....                      | 31,000.00          |
| General Fund .....                              | 5,000.00           |
|   | <hr/>              |
|   | 36,000.00          |
| TOTAL CASH AND INVESTMENTS - APRIL 7, 1945..... | <u>48,382.35</u>   |

\* RECOMMENDATIONS—I recommend that the dues be not raised, and that no money be pro-rated for Medical Defense for the year.

Respectfully submitted,  
C. E. YOUNT, M. D., *Treasurer.*

\* Recommendations adopted by the Council and the House.

*Report of The Editor  
of Arizona Medicine*

The Journal has been proceeding on a hand to mouth existence. By this I mean that we started out January, 1944, when *Arizona Medicine* came into being, without any backlog of material for publication. We still have no accumulation of papers - although I might add that I have a fairly good list of papers promised.

At the beginning I would worry some about where the material for the next issue was coming from, but so far enough has always managed to creep in by the end of 60 days. Cancellation of the clinical program this year has been a blow, but we have been promised one paper by each of the men we invited from Baylor University which will help immeasurably and which is sincerely appreciated.

If you have noticed, we have a nice long list of advertisers, and the amount of advertising has been increasing with each issue. It has reached the point where we could carry more clinical material.

You know, an Editor gets some funny ideas after he edits a Journal for a time. At times it seems that no matter how many articles you publish or how excellant reading they make, no one goes to the trouble of reading any of them. So what is the use of publishing a medical journal! Morris Fishbein says he has the same trouble. He says from the best of

his knowledge, doctors read the "Tonic and Sedative" column then turn to the obituary column to see if anything has happened to their competitors.

There is one person, besides the editor, who profits by having a medical journal published and that is the man who prepares a paper for it. So I am inviting each one of you, individually and collectively, to write a paper for *Arizona Medicine*.

Signed,  
FRANK J. MILLOY, M. D.

**COMMITTEES****MEDICAL SERVICE PLAN  
FOR ARIZONA***Report of Committee on Medical Economics \**

The committee on Medical Economics (Drs.: Meade Clyne, Tucson; C. E. Patterson, Tucson; R. S. Flinn, Phoenix) was instructed by the Council to canvas the membership and seek their opinions as to: a. whether now might be the time to promote a Medical Service Plan for Arizona, and b. whether such a plan should include both surgical and medical care, or surgery and obstetrics only in an initial plan.

The Council was promoted to request this study in order to bring past studies up-to-date, and because of the inauguration of a Blue Cross Hospital Service Plan in Arizona.

Letters were therefore sent by the Committee

to all members asking the two questions mentioned in the first paragraph above, and sending each a brochure on "Non-Profit Medical Service Plans" now in operation in various states and cities with the Blue Cross cooperating in some phase of the administration of the plans outlined.

Replies were received from approximately one-third of the membership. Members from county society responded which gives a good cross section reply even though the response was not what it should have been from physicians in the more populous areas especially.

#### BREAK DOWN OF REPLIES

*"Yes"* Replies were predominate, the general response being that now is the time to inaugurate a Medical Service Plan in Arizona.

*"No"* Replies were in the minority — only 3 in all.

A few were uncertain.

Of those replying "yes" to the need for such a plan, all agreed that surgery and obstetrics should be included from the outset, and that medical care should be added later if not included at the outset.

The Michigan Plan was the one most frequently cited as a good pattern.

Physicians from Rural Areas say the plan should be "practical, efficient, state wide, and reasonable in cost to subscribers". It was also stated by these physicians that such plans usually worked better in urban areas but that rural populations needed them as much as others.

*Whether plan should include both medicine and surgery:* Consensus of reply was that thinking in terms of service to individuals all services should be included, but that in thinking of problems of administering the program, perhaps only surgery and obstetrics should be included at the outset. (Michigan again cited for its experience in this respect.)

*"No"* Replies: Feel that need for such a plan has not yet been established in Arizona. The problem is more of a social and economic one than medicine. Increases the physician's work but lowers his income because fees would be lowered. Puts control with lay group. (This was an erroneous opinion as such plans are directed by medical officers. The Blue Cross Board of

Directors is one-third physician members, one-thirds hospital representatives, and one-third lay).

Whether or not a medical service plan should be administered in part by the Blue Cross Service will be discussed by this house for the further guidance of the committee and council.

#### Questions for Consideration

In order to have experienced replies to the following questions, Mr L. Donald Lau, executive director of the Blue Cross Hospital Service Plan for Arizona, will give his views on the following pertinent points:

1. In a number of states, the Blue Cross administers both the hospital and medical service plans. Could you tell us how this is done so far as medical service is concerned? That is . . . what part of the administration falls on the Blue Cross and what part on the medical organization?

2. What would be an estimated cost for administering a medical service plan in Arizona under such a joint arrangement?

3. In securing subscribers to the hospital service plan do you have any calls for medical service plans to go along with your service? This will aid in determining how soon Arizona might be ready for a medical service plan.

4. Should a medical service plan be inaugurated in Arizona, and should this Association desire the Blue Cross to assist in administration, how long a period of time would Blue Cross service need to be prepared to assist? How much of a personnel would our Association need, in your opinion, for conducting its part of such a joint service?

#### Recommendations of Committee

1. That a summary of the findings on the above questions of administration, and the recommendations of this Council and House be mailed the membership with the request that they give further recommendations on these points. A copy of a model medical service plan should also be included for their future study.

2. Since Colorado is western and has problems similar to Arizona, and since Colorado also has a successful medical service plan, the Committee recommends that the Association either defray the expense of some officer or committee member to go to Denver and get first hand information on their set-up, or that Mr. McNary, their

head, be invited to come here and meet with the Council and Committee to give needed information. Mr. McNary is an official of the Hospital Service Plan Commission of the American Hospital Association and might include Arizona on one of his itineraries. Or such information as needed might be procured by correspondence if this expense is not deemed feasible.

#### *Enabling Legislation*

No proper law exists in the state at this time under which a non-profit medical service plan would operate. An Enabling Act would seem to be in order. The Committee on Public Policy and Legislation has laid a draft of a sound enabling act before an experienced attorney in these lines to learn whether or not such a law would be controversial to those who, in the 1943 session of the legislature, saw to it that the former non-profit provision in the Code was nullified while a Mutual Benefit Insurance Act was enacted. The Committee on Legislation will report their findings as to the possibility of securing the passage of an Enabling Act with our state legislature.

#### *Conclusion*

The Committee studies, to date, have been concerned with generalities, and possible costs of operating and administering such a medical service plan. The problem on these points is: Where and how to raise the funds necessary to initiate such a program.

Medical aspects of such a service plan are not being reported on at this time. Several successful plans are in operation in other states that may serve as guides when this Association is ready to formulate its specific plan. Arizona is still a small state, industrially speaking, but it is the general feeling that if a hospital service plan can succeed, a medical service plan may also.

The subject is now before the Council and House for discussion and further study.

\* Recommendations adopted by the Council and the House.

Signed,

#### COMMITTEE ON MEDICAL

##### ECONOMICS

Meade Clyne, M. D. Chairman,  
Tucson  
C. E. Patterson, M. D. Member,  
Tucson  
Robt. S. Flinn, M. D. Member,  
Phoenix

#### REPORT OF COMMITTEE ON PUBLIC HEALTH EDUCATION \*

##### *Review*

The Council and House, Annual Session, 1944, voted funds to the Committee for weekly broadcasts as follows:

Three series of weekly broadcasts, day time rates, over the Arizona Network (KOY, Phoenix; Bisbee; KTUC, Tucson). The series of 13 programs each were: "Before the Doctor Comes," "Dodging Contagious Disease", "Live and Like It". The response to the first two series (transcribed interviews) was excellent while response to the third series (dramatized and transcribed) was less. It was our opinion that the third series contained too little health information, yet not sufficient drama to satisfy the usual 'addict' to radio drama. These programs cost \$18.84 each broadcast.

The Council, at its session in December, 1944, authorized the Committee to transfer its program to KTAR, Phoenix, of 5,000 watts capacity and to an evening hour which requires a higher rate of pay. KTAR was desired as a recent survey by a national firm showed this station to have a greater listening audience at the time available than the other Arizona networks or stations.

Over the Arizona Network mentioned above, the daytime hour of 10:30 each Saturday morning was used with good results as the programs appealed especially to mothers. Over KTAR, the committee has bought the hour of 6:15 each Monday evening for a full year beginning with last January 22nd. This is at a cost of \$24.00 for each broadcast.

\$1,080.61 has been expended for radio programs since the last annual meeting.

As further public health education, the Committee has used the two daily papers of Phoenix, the two dailies of Tucson, and the Bisbee Review of Bisbee to advertise the weekly radio programs. The papers seemed pleased with this recognition. \$116.24 has been expended in this manner to date.

Still furthering our programs, the Committee has printed 10,000 pamphlets listing the radio programs from January 22 through September 10, 1945. These are for mailing to the public and for distribution through physician's offices preferably from their waiting room tables. The pamphlets are being 'doled' out for such dis-

tribution to make them effective through the entire series as contracted rather than exhaust them in the first weeks of the broadcasts. This expenditure was \$65.50, exclusive of postage cost for mailing.

*Recommendations of Committee  
to Council and House*

1. Continue weekly programs over KTAR as contracted until January 22, 1946 and add KVOA, Tucson, beginning immediately and continuing through 1945. This will be at a cost of approximately \$40.00 per program as compared to the present \$24.00. We recommend the Tucson station as it has a 1,000 watt output where the other stations on this network (Globe, Jerome, Prescott, Safford, Yuma) have but 250 watts each. Other stations should be added gradually, in the opinion of the committee in view of other recommendations.

2. Institute weekly series of health articles in the leading papers of the state (all dailies, and each county weekly). These articles would cover seasonal health articles, and timely social and economic subjects. For example, seasonal health articles would include such subjects as: The Common Cold, Infantile Paralysis, Contagious Diseases, and the like at the season of the year when most prevalent. Social and Economic articles would cover pending state and national legislation relating to health but never in a controversial manner and other medical matters of interest to the public,—always presented in a non-controversial manner.

The Committee on Public Health Education includes the Press, Radio, and Fraudulent Medical Advertising. We have a sound start for the Radio. The Committee is suggesting item 2 in the recommendations to bring press relations up to date. Fraudulent Medical Advertising may be effectively woven into the programs of the press as it has been done in the radio programs through broadcast on, "Dangerous Drugs in the Home", and "The Use and Misuse of Prescriptions."

3. To carry out such a program for 1945-1946, the Committee is asking for a minimum of \$3,000. The forthcoming changes in the national aspects of medicine, scientifically and economically, necessitates some such an expanded program for public health education in Arizona.

\* Recommendations adopted by the Council and the House.

Respectfully submitted,

COMMITTEE ON PUBLIC HEALTH  
EDUCATION

H. L. McMartin, M. D. Chairman,  
Phoenix

Geo. O. Bassett, M. D. Member,  
Prescott

J. S. Gonzales, M. D. Member,  
Nogales

Paul H. Case, M. D. Member,  
Phoenix

REPORT OF COMMITTEE ON PUBLIC  
POLICY AND LEGISLATION\*

THE FORMAL REPORT of this Committee was published in the May issue of ARIZONA MEDICINE. A copy of that number is in your hands, of course, and a copy was also mailed to each member of the Seventeenth Legislature.

The bill to amend the Medical Practice Act and strike the osteopath from that board and substitute a doctor of medicine and surgery in his place—in as much as the osteopaths now have their own board—was not taken up by the House in the final ruch. The Senate passed this amendment unanimously and the House assured us they would do the same but by what they called a "fluke" the bill did not come out for House vote. Since a number of other good bills met the same fate, we are willing to accept their explanation. This amendment will again be sought at the first opportunity as the osteopaths are in agreement with the amendment, hence there is no controversy.

*The main recommendation of The Committee on Public Policy and Legislation is:* That the Association set up a public relations fund of \$5,000 for the year 1945-1946, for the purpose of defraying the cost of radio, newspaper and legislative activities of a public health nature.

Since this committee has half of its duties in carrying out the public policies of the association, the recommendation therefore covers radio and newspaper activities. This will leave the general fund for other association activities and operative expenses.

Expended for this year's legislative activities was approximately \$200.00. This was used for mimeographing, printing, long distance calls,

wires and the like. No money, or reasonable facsimile thereof, was paid to a lobbyist, and it is not the recommendation of this committee that any part of a Public Relations fund be used in this manner. Success in legislation, so far as this state has been concerned, has been due to the contacts made by our own members with the legislators in their local communities, and to the program of feats to which our officers and committees have always strictly adhered. A public relations mailing list is anticipated.

As to ways and means of raising the fund suggested, and to open the discussion, the Committee further recommends that there be voted from Association funds any surplus the Council feels appropriate or possible, and that the remainder be raised by a pro-rata assessment upon the county medical societies. A county society quota would be in proportion to its membership with each county society the judge as to whether it shall raise the quota from their surplus funds, from individual assessment, or otherwise.

\* Recommendations adopted by the Council and the House.

Respectfully submitted,

**COMMITTEE ON PUBLIC POLICY  
AND LEGISLATION**

Jesse D. Hamer, M. D., *Chairman*,  
Phoenix  
Chas. A. Thomas, M. D., *Member*,  
Tucson  
Walter Brazie, M. D., *Member*,  
Kingman

**RECOMMENDATIONS AND REPORT ON  
MEDICAL DEFENSE**

The report on the legal aspects of the work of the Committee on Medical Defense will be presented, as has been the custom, by the attorney who has the calendar of cases in hand.

Having been on this Committee since its inception, I can see a changing aspect to the situation as the years pass. It was the original plan of those outlining this defense and the fund to support it that the fund should reach a total of \$50,000 before assessment for building it up would be discontinued. When reaching the \$50,000 level it was thought that the interest on the investments would support the annual cost of defense.

The fund is not yet at that peak but I am not sure that it need be built up to that figure. It

has been the practice of the Council and House the past few years to prorate a certain part of the dues to the defense fund, or to recommend that no part of the dues go into the fund for a current year. In other words, we have not always added to the fund each year recently. It is my feeling that whether or not the fund should be built further, should rest with the Council and the House. Cost this past year has been light so that additional funds need not be pro-rated this year unless desired by these two bodies.

It would seem, from the trend of the times, that the Association might need to be building up a closely woven program of some sort with the public—threats of socialized medicine, rehabilitation, and the like are all questions requiring public education. Physicians and surgeons of medicine are the ones who should unpaid such education. If there is more need for funds for such a public relations program, I am for it, for the present at least, instead of further building the defense fund.

Signed,

D. F. Harbridge, *Chairman*  
John W. Pennington  
A. C. Carlson

**COMMITTEE ON INDUSTRIAL RELA-  
TIONS ANNUAL REPORT,  
APRIL 8, 1945**

The Committee on Industrial Relations, as appointed by the President, Dr. Dan L. Mahoney, and approved by the Council, at the Annual Meeting of 1944 was: Drs. Carlson, Clyne, Lytton-Smith and Pennington as holdovers, and Dr. O. E. Utzinger as a member for 1944-1945. The Industrial Commission of Arizona designated Dr. C. E. Yount of Prescott to serve on the Medical Advisory Board in addition to the members of the Association committee. It must be understood that the choice of membership for the Medical Advisory Board, as set up in the Compensation Act, is entirely at the discretion of the Industrial Commission of Arizona. It has largely been their custom to name the Industrial Relations Committee of the Association to serve in this Medical Advisory capacity, but this is entirely at their discretion.

The Association Committee on Industrial Relations is authorized by the By-laws "to represent the membership of the Association in all

questions and decisions relating to medical relations under workmen's compensation and shall enter into any arrangements or agreements with the Industrial Commission of Arizona which in the judgment of the Committee may aid in carrying out its purposes."

In the earlier days of the Committee, physicians having complaints against payment of their fees, consultations and all matters relating to their industrial patients, appealed to this Committee for clarification of any confused situation. In the recent years of the Committee, physicians have become so accustomed to the full operation of the workmen's compensation law as it pertains to industrial accidents, that few problems have been laid before the Committee by the membership at large. This speaks well for the operation of the law, but the Committee would be pleased to have more contact and correspondence with the membership from time to time as to their industrial practice and problems—just so the Committee may function fully as an Association group.

It has been the custom to hold meetings of the Committee on Industrial Relations on a Sunday preceding the Monday session of the Medical Advisory Board. This is done to save these men making two trips to Phoenix for two separate meetings for, as we have said, it has been the custom of the Industrial Commission of Arizona to name the Association committee to serve as its Medical Advisory Board. The Committee names its own secretary who attends the Sunday meetings of the Committee, taking Minutes and discharging similar routine duties. He is not, however, a member of the Medical Advisory Board which convenes for the purposes of the Industrial Commission of Arizona.

During the season just closed—(our last report outlining the Annual activities having been given on April 4, 1944 for the season closing with March 5, 1945)—the Committee on Industrial Relations has held six meetings for the year. April 3, May 7, June 4, Sept. 10, Nov. 5, and Feb. 4, 1945, were the dates of the meetings held. All meetings were held at Phoenix at the Westward Ho except for one session which was also held at Phoenix but convened at the Grunow Clinic. Attendance at the meetings is excellent, there being no absences except for such times as members might be away on vacation. By invitation members of the Indus-

trial Commission and the claims managers are in attendance and display a keen interest in the proceedings from month to month.

No matters of great consequence came before the committee during the past year, most matters being of routine nature in connection with questions arising with the Medical Advisory Board and referred to the Committee for discussion. The meeting time for the Committee was changed from the luncheon period to the evening hour of seven thirty to afford members from out of town more time to reach Phoenix during the day. Supreme Court decisions were reviewed on several occasions especially as relating to small mine owners and their coverage under industrial compensation, and as to functional disability of injured employees. The question of distinction between general and functional disability and general permanent disability was one arising from a Court opinion which claimed the attention of the Committee. The main questions to be answered in these respects were determined to be: 1. Are further examinations or treatments indicated? 2. Is condition stationary? 3. If the condition is stationary, what is the "general" physical disability? 4. When in your opinion will the claimant be able to resume his usual work? 5. When in your opinion will the claimant be able to resume any type of work? This matter was brought to the attention of the physicians of the state by the Industrial Commission of Arizona.

It is also of interest that industrial fees were raised 20% for a period of six months at the request of the Industrial Relations Committee from the time authorized in September. The Industrial Commission notified all physicians of the state of this change.

The Committee urges the membership to lay any matter before it regarding industrial practice which a member feels should have the attention of the committee or which the member may wish clarified for his own information. The Committee on Industrial Relations is set up to serve our membership and that is what we wish to do in every way possible.

We wish to thank the membership for their consideration and wish to compliment them for their procedures with industrial cases. The Committee also wishes to thank those members of the Industrial Commission of Arizona who

have met with us from time to time and for their kindly advice and cooperation.

Respectfully submitted,  
FRANK J. MILLOY, M. D.,  
*Secretary to Committee.*

April 8, 1945

#### REPORT OF COMMITTEE ON AUXILIARY ADVISORY

The Committee on Auxiliary Advisory is set up to assist the Auxiliary in their activities and to request their assistance in return when association programs need the "feminine" touch.

During the past year, the Council voted \$200 to the Auxiliary for its Cancer program.

The central office is at the disposal of the Auxiliary for filing its records, and for such assistance as that office is able to give from time to time. A portable, metal filing case was given the Auxiliary last fall for the use of their officers in filing their necessary materials and transporting the same from place to place. In addition, the central office mimeographed ballot material for the Auxiliary in connection with their annual duties.

In the past, the Auxiliary have been provided badges, programs and the like for the Annual Meeting. Since the meeting was canceled this year for the Association as well as the Auxiliary, such badges and programs were not distributed to either group.

The Committee has been pleased to render these few services.

Respectfully submitted,  
Geo. R. Barfoot, *Chairman,*  
Florence B. Yount,  
W. Claude Davis.

#### Questions Of Administration Re A Medical Service Plan

L. Donald Lau\*

The invitation of President Mahoney, on behalf of the Committee of Medical Economics, to attend this meeting was accepted in an earnest desire to be of service to the Medical Association. Some specific questions on the administration of a possible Medical Service Plan were asked of me in the invitation extended. As director of the Blue Cross Hospital Service Plan in Arizona, I am happy to be in a position to reply to these questions from material our office

has amassed. I shall speak on matters of cost and personnel, as I would not presume to discuss or advise on the medical aspects of such a service as you are studying. All questions asked me deal with administrative problems, only. That is as it should be.

The first question asked was, 1. In a number of States the Blue Cross administers both the Hospital and the medical Service Plans. Could you tell us how this is done so far as the medical service is concerned? That is—what part of the work falls upon the Blue Cross administrative office and what part on the Medical Association sponsoring a medical service plan?

In the States where the Medical Service Plan is administered by Blue Cross various methods are used. In Colorado the Medical Service has no employees except a part time Medical Director who serves two or three hours a week and receives a small salary. Blue Cross does all the selling, billing and administrative work, the money from the Medical Plan being placed in a separate bank account, against which checks are drawn to reimburse the physicians.

In St. Louis, Missouri, where a new Medical Plan is about to begin enrollment, the function of the Medical Association through its Executive Committee is to pass on disputed claims and to issue checks to the participating physicians from a separate Medical Plan Account. The enrollment, billing, accounting and collection of dues are handled by Blue Cross.

The Western New York Medical Plan, with headquarters in Buffalo, is one of the oldest community-wide Medical Plans. Organized in 1940, it has had experience with Limited Surgical Benefits, with comprehensive Medical-Surgical Benefits, as well as both of the foregoing types of contracts written on a service basis and also on an indemnity basis. The Western New York Medical Plan is administered by Blue Cross through a Service Agreement. Originally the Medical Plan employed a Director and sufficient clerical help for handling the medical claims. At the suggestion of the medical profession's own trustees the administration has been placed under the same general supervision for both plans. Under the present arrangements the Medical Plan has no separate employees of its own as all employees serve both Corporations.

The Second question—2. What would be the

\* Executive Director Blue Cross Hospital Service for Arizona.

estimated cost for administering a medical service plan by such joint arrangement? We realize you would be able to give us round numbers here but would appreciate such estimates as you feel reliable.

The cost of administration of a Medical Plan by Blue Cross will, I believe, vary with the type of service agreement decided upon. The Colorado Medical Association advanced two thousand dollars to Blue Cross for the initial printing of material and setting up of administrative procedure. After the first contract became effective all costs jointly incurred have been equally shared and those costs, hospital and medical, applying directly to either plan are paid by the plan incurring them. Colorado Medical Service, with less than three years' experience, and Blue Cross, with over seven, are jointly operating at the present time at 11% of earned income.

In St Louis Missouri the agreement is, that Blue Cross is to make no profit and sustain no loss in the administration of the Medical Plan. The idea is to make a flat charge for administration during the first few months and thereafter apply the actual operating percentage against the earned income of the Medical Plan.

In Arizona I believe the initial cost to inaugurate a Medical Plan would be between three and five thousand dollars with the Plan becoming self supporting after the first year's operation. I feel confident that administration costs will run parallel to and not exceed those of Blue Cross. We are required by the American Hospital Association Service Plans Commission to operate not more than 30% of earned income the first year and reduce this figure monthly until at the end of three years we are operating at 15% or less.

The Third question—3. In securing subscribers to the hospital service do you have any calls for medical service plans to go along with your service? This would aid us in determining how near Arizona might be ready for medical service.

We not only have continuous requests for a Medical Service Plan, but have actually failed to enroll groups in Blue Cross because of the lack of it. For example: A well established clothing store in Phoenix, with 50 employees, although very favorable to Blue Cross, has chosen a commercial plan in order to obtain surgical benefits. Another with 80 employees, although wanting Blue Cross, has failed to enroll because

of lack of a Medical Plan. A Tucson concern has group life insurance with a commercial plan and would like to have Blue Cross Hospitalization if we can arrange for a commercial plan to write surgical coverage and weekly indemnity. Commercial companies will write life and weekly indemnity separate but as a rule will not offer surgical coverage except in conjunction with their complete full coverage plan. Colorado, St Louis, and Western New York, before the inauguration of Medical Plans had countless request for this service. Several other large concerns, who have commercial plans have informed us they would consider Blue Cross if it had a companion Medical Plan and another politely told us to call back when we could offer a Medical plan as well as the Blue Cross Plan. In our short period of operation, we have met with a consistent demand for a Medical Service Plan and it is my opinion that this demand will increase rather than decrease. You will appreciate the fact that I am not in a position to give you the names of the firms to which I refer—a sort of "military secret" situation, you know.

The last question is—4. Should a Medical Service Plan be inaugurated in Arizona and should this Association wish the Blue Cross Service in Arizona to assist in administering the plan, how long a period of time would your service need, to be prepared to assist in securing enrollment for a medical service plan? How much of a personnel would our Association need, in your estimation, for conducting its part of such a joint service?

We shall need a year's time to perfect our administrative procedures and I should say that by the beginning of May, 1946, we will be fully able to cooperate in administering a Medical Plan.

In regards to the amount of personnel the Medical Association would have to employ, it would depend largely on the type of service agreement set up. As I previously stated, the Colorado Association has only one employee, the Missouri Medical has no paid employees and the Western New York Medical Plan had a separate Medical Director and small office staff which they later merged with the Blue Cross Staff.

In conclusion I would like to state that we fully appreciate that the medical association has a job on its hand in working out a medical plan. With the experience of a number of good

plans to guide you, I believe your association can set up an excellent plan in Arizona without too much initial cost. Your Association has given the Blue Cross Hospital Service Plan your official approval and support. When the time comes to set your wheels into motion, as Director of the Blue Cross Service, I shall be happy to lay any request you may have before our board for its consideration and support.

I shall leave a copy of this digest with you for your committee and for your files and also certain administrative materials from various sources which may be of some help in your future studies and procedures.

Thank you very much for the opportunity of rendering your association this small service in return, may I say, for courtesies you have extended to us. I shall be happy, Dr. Mahoney, to answer any floor questions, at this time within the range of my administrative experience and observation. If there are no questions I shall leave you to your discussions and again thank you for your courtesies.

*Address to Council and House by Invitation.*

## Report Of Annual Meeting Of Council And House

The Annual Meeting of the House and Council was held at Tucson on Saturday, April 28. Due to directive of the Office of Defense Transportation, Washington, D. C., the scientific meeting was denied.

In attendance from the Council were: Drs. Dan L. Mahoney, Charles P. Austin, O. E. Utzinger, Hal W. Rice, E. Payne Palmer, F. W. Butler, J. N. Stratton, Jesse D. Hamer, Geo. O. Bassett, C. E. Yount, Frank J. Milloy, John W. Pennington, (seated by consent of Council and House to represent Dr. D. F. Harbridge on Council who, as Chairman of Medical Defense, was unable to attend. Dr. Pennington as a member of the Committee therefore served in his place). Absent from the Council were: Drs. Robert S. Flinn and Walter Brazie, the latter being detained by the critical illness of Dr. Toler R. White, his associate. Dr. White has since passed away.

Ten of the fourteen county societies were represented in the House, the Counties of Apache, Mohave, Navajo—all remote northern groups—and Santa Cruz were unable to send delegates. Attending were: **Cochise:** A. N. Shoun

and Hal W. Rice; **Coconino:** Charles W. Sechrist and G. F. Manning; **Gila:** Russel R. Noice and Nelson D. Brayton; **Graham:** F. W. Butler and J. N. Stratton; **Greenlee:** Charles P. Austin; **Maricopa:** James R. Moore, James M. Ovens, Geo. R. Barfoot, Ben Pat Frissell, Paul H. Case, R. Lee Foster; **Pima:** Meade Clyne, V. A. Smelker, Chas. S. Kibler, George L. Dixon, Ed J. Gotthelf and Edw. W. Hayden; **Pinal:** C. R. Swackhamer, O. E. Utzinger; **Yavapai:** Geo. O. Bassett, C. E. Yount; **Yuma:** A. I. Podolsky and Wm. A. Phillips.

**BUSINESS (Summary)** The following were the main items of business with the action of the Council and House indicated:

**I. PROPOSED MEDICAL SERVICE PLAN FOR ARIZONA.** *The Committee on Medical Economics* reported on its studies based on letters sent the membership as to whether now might be the time for inaugurating a medical service plan in Arizona. Their report is given in full elsewhere in this issue.

### *Action of Council and House:*

1. Voted: That a further study be conducted with the membership as to medical aspects of such a plan, the administrative aspects being the only ones studied to date.

*Mr. L. Donald Lau, Executive Director of the Blue Cross Hospital Service Plan for Arizona,* was present at the invitation of President Mahoney and the Committee, and presented administrative possibilities of the plan under study. Mr. Lau's paper is published in full in this issue.

2. Voted: That some committee member or officer, be sent at Association expense to Colorado during the summer to study the operation of the Blue Cross and Medical Service Plans in operation there, if all necessary information may not be obtained by mail.

**II. THE COMMITTEES ON PUBLIC POLICY AND LEGISLATION AND PUBLIC HEALTH EDUCATION,** jointly recommend that \$5,000 be appropriated for a public relations program to cover radio, press and similar agencies or mediums—the purpose of such a public relations program is: to bring the latest information available to the public on the scientific and economic aspects of medicine.

### *Action of Council and House:*

\$5,000 was appropriated from the general fund for defraying the cost of a Public Relations program for the year 1945-1946, the program

to include, press radio and printed material, state wide in scope.

**III. UNITED PUBLIC HEALTH LEAGUE:** Arizona Medical Association gave membership support to the United Public Health League for the year past, this league consists of six of the western states which have set up an office at Washington, D. C. to keep in touch with medical situations before Congress and keep Congress informed on the needs and wishes of the West.

*Action of Council and House:*

Will await further developments before continuing membership as both the League and the AMA now have Washington offices. If the League continues the Washington office, Arizona will then act as to its membership.

**IV. RECOMMENDATION OF THE TREASURER:** That dues remain at present level for the ensuing year and that no part of same be appropriated to the Medical Defense fund, was adopted by the Council and House.

**V. Other reports of officers and committees, not embracing expenditures of funds, will be found in the Organization Section of this issue of the Journal.**

**VI. ELECTION OF OFFICERS:**

Officers elected for 1945-1946 are

**PRESIDENT**

Dr. Chas. P. Austin.....Morenci  
(by election 1944)

**PRESIDENT ELECT**

Dr. Geo. O. Bassett.....Prescott

**VICE-PRESIDENT**

Dr. John W. Pennington.....Phoenix

**SECRETARY**

Dr. Frank J. Milloy.....Phoenix

**TREASURER**

Dr. C. E. Yount.....Prescott

**SPEAKER OF HOUSE**

Dr. F. W. Butler.....Safford

**COUNCIL SOUTHERN DISTRICT**

Dr. Hal W. Rice.....Bisbee  
Holdovers and not subject to election:

**DELEGATE TO AMA**

Dr. Jesse D. Hamer.....Phoenix

**COUNCILORS AT LARGE**

(three immediate past presidents automatically taking this office upon expiration of term as president)

Dr. Dan L. Mahoney.....Tucson

Dr. O. E. Uttinger.....Ray

Dr. E. Payne Palmer.....Phoenix

**CHAIRMAN MEDICAL DEFENSE**

Dr. D. F. Harbridge, .....Phoenix

**COUNCILOR CENTRAL DISTRICT**

Dr. Robert S. Flinn .....Phoenix

**COUNCILOR NORTHERN DISTRICT**

Dr. Geo. O. Bassett .....Prescott

**HISTORY AND OBITUARIES**

Dr. Hal W. Rice, Historian, presented a tender tribute to members of the Association deceased since the last Annual Meeting. An 'In Memoriam' card is sent out through the office of Historian to the families of the deceased members and to the county medical societies. The following is the text of this year's card:

**IN MEMORIAM**

|                                   |                      |
|-----------------------------------|----------------------|
| <i>Lt. Comdr. Lyle A. Condell</i> | <i>O. B. Moon</i>    |
| <i>John W. Flinn</i>              | <i>W. S. Sharp</i>   |
| <i>F. J. Gallagher</i>            | <i>J. E. Shearer</i> |
| <i>Harlan P. Mills</i>            | <i>A. A. Shelley</i> |

They are not long, the weeping and the laughter,  
Love and desire and hate;  
I think they have no portion in us after  
We pass the gate.  
They are not long, the days of wine and roses;  
Out of a misty dream  
Our path emerges for awhile, then closes  
Within a dream.

—Ernest Dowson

Arizona Medical Association, Annual Session,  
one thousand nine hundred and forty-five

Signed

Frank J. Milloy, Secretary

**PROMINENT STATE LEGISLATOR PASSES**

Mr. A. Berky, member of the Seventeenth Legislature from Pima County, passed away at Tucson on May 17 after a brief illness. His legislative services began in 1942 and in this brief period of service to his state he served it well in that his support was to be found on the side of the people in matters of beneficial interest to them. Mr. Berky was of the school of legislators who would voluntarily consult with any organization or community group to be affected by pending legislation. He would be guided in his deliberations and final action by the advice received from these conferences.

The Arizona Medical Association joins the many who regret the passing of this able legislator.

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## *Staff Meetings*

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**ST. MONICA'S HOSPITAL, PHOENIX**

February 19, 1945

1. Brief Comments of Therapy in Endocrinology—Dr. Raymond Jannett.
2. Parathyroid Disease with Skeletal Changes—Dr. H. J. McKeown.

March 19, 1945

1. Medical Care of the Poor at St. Monica's Hospital—Dr. Louis Baldwin.
2. Presentation of an Interesting Gynecological Case with Operative Findings—Dr. Clark MeVay.

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**ST. JOSEPH'S HOSPITAL, PHOENIX**

March 12, 1945

1. Dermatologic Slides—Dr. Geo. K. Rogers.
2. Congenital Jejunal Obstruction — Dr. Robt. T. Phillips.

Surgical Aspects—Dr. James M. Ovens.

April 9, 1945

1. Caudal Anesthesia with Evaluation of Recent Reports—Dr. Geo. R. Barfoot.
2. Serology and the Diagnosis of Syphilis—Dr. T. T. Frost.
3. External Fixation and Presentation of Case of Fracture of Femur—Dr. Matthew Cohen.

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**ST. MARY'S HOSPITAL, TUCSON**

February 20, 1945

1. Hematogenous Osteomyelitis: 2 case reports—Dr. G. L. Dixon.
2. Brain Tumor—Dr. C. M. Witzberger.

March 20, 1945

1. Hematogenous Tuberculosis—Dr. W. H. Oatway.
2. Atypical Anemia—Dr. V. G. Presson.

April 17, 1945

1. Symposium on Lupus Erythematosus Disseminatus—Dr. V. Tappan, Dr. B. Zemsky, Dr. B. Bloom.

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**GOOD SAMARITAN HOSPITAL,  
PHOENIX**

February 26, 1945

1. Meningovascular Syphilis—Dr. S. K. Conner.
2. Preoperative and Postoperative Irradiation in Malignancy—Dr. W. W. Watkins.

March 26, 1945

1. A Mediastinal Tumor (with Case Presentation)—Dr. Howell Randolph.
2. A Case Report of Tuberculosis Complicating Pregnancy—Dr. L. C. MeVay.

April 23, 1945

1. Case of Splenomegaly—Dr. J. D. Hamer.

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**PIMA COUNTY MEDICAL SOCIETY  
TUCSON**

March 2, 1945

1. Silicosis and Related Diseases—Dr. LeRoy U. Gardner, Saranac Lake, N. Y.

April 10, 1945

1. Cancer Problems—Symposium.
2. Phases of Socialized Medicine.

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**MARICOPA COUNTY MEDICAL SOCIETY,  
PHOENIX**

March 5, 1945

1. Inhalation Diseases of the Lung—Dr. LeRoy U. Gardner, Director of the Saranac Laboratory, Saranac Lake, N. Y.

**SPECIAL MEETING**

March 9, 1945

1. The Treatment of Silicosis with Aluminum Dust (Film Demonstration)—Dr. J. W. G. Hannn, Medical Director for McIntyre Research Limited, Toronto, Canada.

April 2, 1945

1. Medical Aspects of Peripheral Vascular Disease—Dr. Robert S. Flinn.
2. Surgical Aspects of Peripheral Vascular Disease—Dr. James M. Ovens.

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In the early part of 1944, the Geigy Co. provided great quantities of Neocid, a DDT composition, to combat the threat of typhus in Naples. It also has provided large amounts of Neocid to help in the fight of the military against the malaria mosquito.

It was the Geigy Co., Inc of New York which had called the attention of the government to the amazing insecticidal properties of DDT compositions.

Because we believe you will want all information on the subject in your files, or for use in articles, there are presented herewith excerpts of a radio talk made January 28th, 1945 by Lt. Col. A. L. Ahnfeldt, Director of the Sanitation and Hygiene Division, Preventive Me-

dicine Service, Office of the Surgeon General of the United States Army.

Col. Ahnfeldt said in part:

"Service men know that DDT is one of their biggest protections from those dread diseases, typhus and malaria. In the last war typhus fever caused three million deaths among civilians in Europe.

"When our men were going into Naples, a typhus epidemic was starting in the city. . . . We set up forty-two delousing stations and also went down into the caves beneath the city where people took shelter against bombing, to dust them with DDT powder. . . . We treated several million people in Naules in a few months and smashed the epidemic. As a result, not one soldier died of typhus. . . .

"In 1942 the Surgeon General's Office first saw the potentialities of DDT. . . . Two medical officers were taking some DDT powder to an isolated detachment of our troops. They were captured by some Bedouins and taken before their chief. It was a pretty tight spot. In desperation they told the chief that they were carrying a magic powder. The chief wanted to see it so the medical officers dusted his robes with DDT. The Americans said that in a few minutes the chief relaxed and smiled and the next day set them free. . . . For the first time in that chief's life he had enjoyed a good night's sleep. . . .

"Thanks to the help of DDT, malaria is under control wherever our men are fighting. . . . We supply it in the form of an oil spray which can be applied to places where mosquitos breed. In addition, where soldiers are living in tents or barracks, DDT is applied to the walls. The minute a mosquito comes in contact with DDT he gets what the men describe as Double Delirium Tremens. . . . The insect becomes nervous and agitated and flies around in a drunken circle before it becomes paralyzed and dies. . . .

"In peace time, DDT may well change the destiny of the earth's population. Right now it is helping us to save the lives of our fighting men and win the war. There is no DDT available for civilian use and will not be for some time. But our postwar world will no longer be scourged by typhus and malaria and other insect-borne diseases. DDT is not a cure-all, but in the perpetual war between humans and disease, DDT is one of the most effective weapons yet discovered by man."

## Woman's Auxiliary

### STATE AUXILIARY OFFICERS AND COMMITTEE CHAIRMEN

| OFFICERS 1945-46        |                                |
|-------------------------|--------------------------------|
| PRESIDENT               | Mrs. Paul Case, Phoenix        |
| PRESIDENT-ELECT         | Mrs. Hervey Faris, Tucson      |
| FIRST VICE-PRESIDENT    | Mrs. Royal Rudolph, Tucson     |
| SECOND VICE-PRESIDENT   | Mrs. Joy A. Omer, Tucson       |
| RECORDING SECRETARY     | Mrs. James R. Moore, Phoenix   |
| CORRESPONDING SECRETARY | Mrs. Louis G. Jekel, Phoenix   |
| TREASURER               | Mrs. Henry E. Running, Phoenix |
| DIRECTORS:              |                                |
| Mrs. James H. Allen     | Prescott                       |
| Mrs. Edward M. Hayden   | Tucson                         |
| Mrs. Harlan P. Mills    | Phoenix                        |
| CANCER PROJECT          | Mrs. Raymond F. Oyler, Tucson  |
| LEGISLATION             | Mrs. C. E. Patterson, Tucson   |
| PUBLIC RELATIONS        | Mrs. George L. Dixon, Tucson   |
| PUBLICITY               | Mrs. T. A. Hartgraves, Phoenix |
| BULLETIN                | Mrs. L. Clark McVay, Phoenix   |
| HYGEIA                  | Mrs. Ludwig Lindberg, Tucson   |
| HISTORIAN               | Mrs. George B. Irvine, Tempe   |
| WAR SERVICE             | Mrs. Dudley Fournier, Phoenix  |

(Mrs. T. A. Hartgraves, State Publicity Chairman)

### ANNUAL MEETING WOMAN'S AUXILIARY TO THE ARIZONA STATE MEDICAL ASSOCIATION

#### President's Greeting

We who were so fortunate as to be present at the luncheon and board meetings in Tucson on Saturday, April the 20th, enjoyed the privilege of renewing our friendships with members of the various auxiliaries. We look forward to a very busy year, as we have much to do in order to carry on our many objectives—chief of which is the promotion of health education. We shall bear in mind that our organization is an auxiliary to the American Medical Association and hope and trust that we may be of value to this association both nationally and locally. There is much in the way of war work to be accomplished if we are to do our part and aid in bringing this conflict to a successful conclusion. We look forward to the day when our members whose husbands are in the armed services return. In the meantime, we hope that we may do as much as possible for the wives of doctors in the armed forces who are here among us. Thus we see that there are all these things and many more to be done. We hope that we may soon have a new Auxiliary of Gila County to work with us. May we do our best.

Sincerely,

MARTHA CASE

State President of Auxiliary to Arizona Medical Association.

#### BOARD MEETING

A board meeting of the Woman's Auxiliary to the Arizona State Medical Association was held in Tucson, April 28th. It was held for the

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| Great Falls Drug Co. . . . .            | Great Falls                   | Shaw Surgical Co. . . . .                 | Portland       |
| McKesson & Robbins . . . . .            | Billings                      | Southwestern Surgical Supply Co. . . . .  | Phoenix        |
| Missoula Drug Company . . . . .         | Missoula                      | Spokane Surgical Supply Company . . . . . | Spokane        |

purpose of reading the annual reports and electing officers for the coming year. No meeting of the Auxiliaries as a whole could be held due to war restrictions. Those attending the meeting were entertained with a luncheon by the Pima County Medical Auxiliary.

In the absence of Mrs. James H. Allen, president, Mrs. Claude Davis of Tucson presided. Reports of the Committee chairman and reports of Yavapai, Pima and Maricopa county presidents were read. Mrs. J. D. Hamer spoke to the meeting and also gave a report of the total hours given by the women of the State Auxiliary to the various war efforts. We were both pleased and surprised by this total. The new officers were installed and the gavel turned to Mrs. Paul Henry Case, the new president. Following this meeting a Board Meeting of the new officers who were present was held.

#### YAVAPAI COUNTY REPORT.....

Mrs. H. A. Hough

Membership of 18 last year. Cancer project one of main objectives. A check for \$93.85 sent to Mrs. E. Payne Palmer and \$16.00 for Cancer exhibit. 60 pounds of woolens were shipped to Phoenix.

**PIMA COUNTY REPORT...** Mrs. J. A. Omer Red Cross work—bandages and sewing . Prevention Work—13 pairs of pajamas and pajama trousers made. Clothes and Xmas cards collected. \$50.00 given for building fund.

34 subscriptions to Hygeia.

13 subscriptions to Bulletin.

Cancer Project: Membership Drive, Educational program, campaign for funds, and making of cancer dressings.

**MARICOPA COUNTY....** Mrs. Louis G. Jekel Served regularly one afternoon weekly at the Service Center.

Contributed \$75.00 to equip the nursery at Luke Field.

Contributed \$15.00 to Camp and Hospital Fund Served a dinner at the U. S. O.

Contributed \$10.00 to Arizona Society for Crippled Children.

Contributed \$100 and many hours work to the Cancer Project exhibit.

**PRESIDENT'S REPORT..** Mrs. Jas. H. Allen No national convention this year.

Hoped to have organized a new auxiliary in Gila. Perhaps next year.

## Menopause Symptoms • Senile Vaginitis • Pruritus Vulvae

### Effective Relief with

• Clinical reports agree that Schieffelin Benzestrol satisfactorily alleviates not only menopausal vasomotor reactions but also other associated climacteric symptoms, such as headaches, joint pains, nervousness and fatigability.

Dose: Oral 2 to 3 mg. daily.

Intramuscular  $\frac{1}{2}$  to 1 cc. every 4 to 7 days.

• Schieffelin Benzestrol is used in relieving symptoms of senile vaginitis and associated pruritus vulvae by converting the atrophic epithelium to the adult functional type. For localized therapy in this condition Schieffelin Benzestrol is available as an ellipsoid tablet for vaginal insertion.

Dose: 1 or 2 vaginal tablets inserted daily.



Literature and samples on request.



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R. LEE FOSTER, M. D., RADIOLOGIST

THOMAS T. FROST, M. D. PATHOLOGIST

DOUGLAS D. GAIN, M. D.

HOURS 9:00 to 5:00  
SATURDAY AFTERNOONS AND SUNDAYS EXCEPTED



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Do your patients say of you, "He is so careful about the smallest detail—he finds the exact correction for your comfort, selects most becoming style to flatter your appearance—his glasses are always so satisfactory to wear!" There is the point where too often the practitioner's reputation is lost for want of the right prescription service. It's why we take infinite pains with our work, use finest precision equipment, supply Bausch & Lomb lenses, frames and mountings.

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A large rectangular area at the bottom of the page is filled with a dense, repeating pattern of the words "Buy War Savings Bonds" and "Buy War Bonds".



# Fresh Fuel

UNTIL her physician has opportunity to observe and treat her symptoms, many a woman—even today—faces the failing fires of the menopause in confusion.

Baffled by irregularity and fits of depression, harried by pain and vasomotor disturbances, she often fears the interruption of a productive life. But when she seeks your advice, you can take satisfaction in the knowledge that you have the answer to her problem—*estrogenic therapy*.

For dependable estrogenic therapy, turn with confidence to Solution of Estrogenic Substances, Smith-Dorsey—a medicinal of guaranteed purity and potency. Smith-Dorsey Laboratories are fully equipped, staffed, qualified to produce a strictly standardized product.

With this product, you may rekindle many of those fitful fires...

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Manufacturers of Pharmaceuticals to the Medical  
Profession Since 1908

Committee on Auxiliary Advisory of the Arizona Medical Association has been very kind. A filing cabinet given us by them and other aid extended us.

BULLETIN REPORT—34 subscriptions.

HYGEIA REPORT—47 subscriptions.

STATE MEMBERSHIPS—132.

## Book Reviews

"THE CHEMISTRY AND PHARMACY OF VEGETABLE DRUGS." Author: Noel L. Allport, F. I. C. Research Chemist, The British Drug Houses, Ltd. Published by The Chemical Publishing Co., Inc., 234 King Street, Brooklyn, N. Y. Price \$4.75.

Noel L. Allport, the author of this book, has made a definite contribution to pharmacy and medicine. He has recalled to the attention of those who are interested, the fact that vegetable drugs have not been replaced by the newer synthetics and hormones. That vegetable drugs, their active principals and the galenicals prepared from them are a very important part of the armamentarium of the pharmacist and the physician.

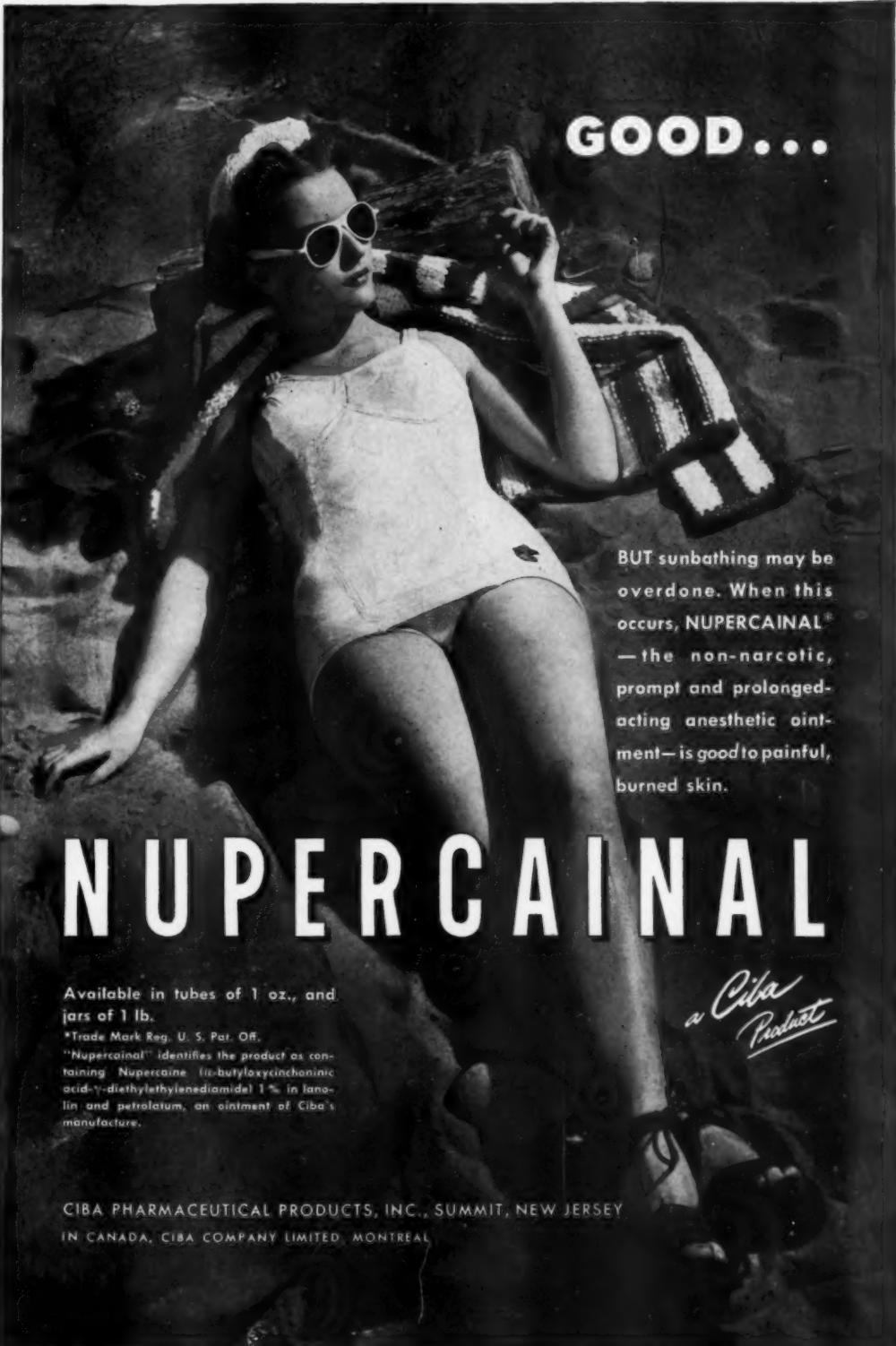
The classification of vegetable drugs is difficult at best. The author had a choice of three divisions: botanical, chemical and therapeutic. He chose the chemical as being the most satisfactory from a practical viewpoint, and so far as possible this method has been used throughout the book.

Vegetable drugs containing physiologically active principles which are referable to the chemical group known as alkaloids are by far the most important. These substances are nitrogenous bases which occur in the plants combined with acids and salts. They are called alkaloids in allusion to their alkaline character. More than two hundred vegetable alkaloids have been isolated but only a few are employed medicinally. The author has compiled a table of the more important alkaloids used in medicine, listing the name of the plant, part employed, name of principal alkaloid, percentage of alkaloid and physiological action.

The next group taken up in this book is the glucosides. These compounds are distinguished by their property of decomposition in the presence of dilute mineral acids, or of certain enzymes with the formation of a sugar and a residual substance of varying complexity.

The purgative drugs, Cascara, Rhubarb, Senna and Aloes contain principles which are closely allied in chemical constitution and are known as emodins. These substances are chemical derivatives of anthraquinone, which is derived from coal tar.

The resins, podophyllin and jalap occur as



GOOD...

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| <b>\$5,000.00 accidental death</b>                           | <b>\$32.00</b> |
| \$25.00 weekly indemnity, accident and sickness              | per year       |
| <b>\$10,000.00 accidental death</b>                          | <b>\$64.00</b> |
| \$50.00 weekly indemnity, accident and sickness              | per year       |
| <b>\$15,000.00 accidental death</b>                          | <b>\$96.00</b> |
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solid amorphous and generally vitrious masses. They are insoluble in water and acids, soluble in alcohol and ether.

The last general grouping in the book, refers to the astringent vegetable drugs known as tannins.

The author devotes a chapter to the preparation of galenicals. Vegetable drugs consist rarely of the whole plant, but of parts of the plant, such as roots, leaves, bark, etc. Various methods are used to prepare the crude material for use. Some drugs are powdered in mills, others are extracted by using suitable solvents, the finished product being in the form of fluid extracts, tinctures, wines, decoctions, etc. Standard methods of assay of active principles have been established, such as biological and chemical determinations. These standards are official in the pharmacopeias of all civilized countries.

The method of presentation of the individual drugs by the author, follows a definite plan. He first discusses the plant, then the active principles, physical characteristics, the best productive areas and the variations in quality of the crude drug. The chemistry is then outlined, the number of alkaloids or glucosides found in the plant in the order of their importance. Next in order are the therapeutic uses of the drug and the principal preparations containing the drug or its active principals. Tables are interpolated throughout the book describing the physical form of the preparation, per cent of active ingredient, solvent or diluent, accessor constituents and uses.

The drugs of interest to the pharmacist, physician and student are opium and its alkaloids, the solanaceous group consisting of belladonna, hyoscyamus and stramonium and their alkaloids, Cinchona with its salts of quinine, ergot its alkaloidal and non-alkaloidal constituents, Nux vomica and its principal alkaloid strychnine, Coca, the divine plant of the Incas, and its active factor cocaine. Ipecac in itself diaphoretic and emetic, yields an alkaloid emetine which is very effective in combating Entamoeba Histolytica, an organism that feeds on red blood cells and liberates a ferment which destroys the intestinal mucosa. Alkaloidal drugs of lesser importance are pilocarpus, physostigma, hydrastis acanthus and lobelia.

The glucosidal drugs in the order of their importance are digitalis strophantus and squill. These drugs stimulate the beating of the heart and at the same time slow the pulse rate. No synthetics capable of replacing these drugs have yet been discovered. Digitalis, the most important glucosidal drug contains several active glucosides, the most important of which are digoxin and gitoxin. Digitalis is biologically assayed by the frog heart and eat method. It is used therapeutically in the form of the tincture or powdered leaf.

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**T**HE effectiveness of Mercurochrome has been demonstrated by more than twenty years of extensive clinical use. For professional convenience Mercurochrome is supplied in four forms—Aqueous Solution in Applicator Bottles for the treatment of minor wounds, Surgical Solution for preoperative skin disinfection, Tablets and Powder from which solutions of any desired concentration may readily be prepared.

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Strophanthus acts similarly to digitalis but is more powerful, and is sometimes preferred to digitalis even though it is more toxic.

Squill, in addition to its action on the heart, is used as an expectorant.

The saponin glucosides such as quillaja, senna and sarsaparilla, so called because they form a soap-like froth when shaken with water, are considered of minor importance in pharmacy by the author.

The best known and most popular of the emodin purgatives is cascara sagrada. Other members of this group are rhubarb, senna and aloes.

The resinous drugs are of academic interest only as they have been replaced by more effective medicaments. One member of this group is of great sociological importance. The flowers of Indian hemp (*Cannabis sativa*) secrete a resin having narcotic qualities and affects the central nervous system. It has been estimated that over one hundred million people habitually indulge in its questionable virtues. The sale of Indian hemp is prohibited by law.

The author includes in a separate group diuretics, emmenagogues and aphrodisiacs as their action is on the genito urinary system. Only a few of these items are of importance since in general, the disorders affecting this part of the body are better treated by synthetic chemicals and hormones of animal origin.

A chapter is devoted to the carminative drugs, a term applied to a group of aromatic drugs which induce a gentle irritation to the alimentary tract and thus afford a sense of well being and comfort to the patient. They tend to stimulate the appetite and produce eructation of gas. The carminatives are of interest to pharmacy as they consist of a group of drugs containing volatile oils. These oils are used for aromatizing and flavoring many pharmaceutical products. Some of the more important carminatives are anise, cinnamon, fennel, clove and cardamom.

The drugs containing bitters are used to increase the appetite, not by direct action on the gastric mucosa, but to a psychical reflex effect caused by the taste of the bitter substance. Members of this group include gentian, taraxicum and quassia.

The author devotes several pages to urdgs used as rubefacients, these produce skin irritation. Well known members are capsicum and mustard. Other drugs used in the treatment of skin disorders are chrysarobin and balsam of Peru. In the same he includes the parasiticides, derris, pyrethrum and sabadella.

The cyanogenetic drugs owe their virtue to a glucosidal substance which liberates hydrocyanic acid. Drugs of this group are cherry laurel leaves, wild cherry bark and bitter almond.

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\**Laryngoscope, Feb. 1935, Vol. XLV, No. 2—149-154.*

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Inflammatory conditions of the respiratory tract, they increase and dilute the secretion of the bronchial mucous membrane and also act as protective agents to the irritated membrane. Three balsams are of importance: benzoin, tolu and storax.

Drugs containing tannin are used for their astringent properties. They are oak bark, catechu and kino.

The anthelmintic drugs are substances used to kill or remove intestinal worms. They are divided into vermicides and vermifuges, depending on their ability to kill or merely cause expulsion of the worms. Malefernin the form of an oleoresin and pelletierine tannate, a mixture of tannates obtained from pomegranate, are favored for the expulsion of the tape worm. Santonine obtained from wormseed is the drug of choice for the removal of round and thread worms.

Demulcents, flavoring and coloring agents are properly classed together as they contribute to the elegance and palatability of medicinal mixtures. Such drugs are licorice, lemon and orange peel, and the coloring agents, eudbear red rose petals and saffron.

In closing, the author makes several observations of a general character. Students of pharmacy medicine and chemistry are inclined to regard the vegetable drugs as being old fashioned, soon, if not already superceded by hormones, vitamins and synthetic chemicals, actually, notwithstanding the great discoveries made in the realm of hormone therapy, coupled with the achievements of modern chemical and biological research, the principal vegetable drugs are not likely to be readily replaced.

It should not be assumed that the vegetable kingdom has been completely explored, on the contrary, the remarkable bacteriostatic substance of penecillin is an example of a newly discovered substance of therapeutic value, derived from the vegetable kingdom.

The investigation of hormones appears to be a more fruitful field of research than the study of vegetable drugs, as it is less empirical. The fact remains that so far as vegetable drugs are concerned, no one really knows why digitalis strengthens the contractions of the heart, why quinine is lethal to the parasite of malaria, or why opium is a powerful sedative. Eventually these questions will be answered, but a medicine is none the less valuable because the reason for its action is not understood, so there is no valid reason for supposing that the use of vegetable drugs will ever be superceded.

Note: The author has used the British Pharmacopoeia as a guide. Many drugs official in the British Pharmacopoeia are not so recognized in the U. S. P., and the reverse is also true.

—Frank H. Nelden.

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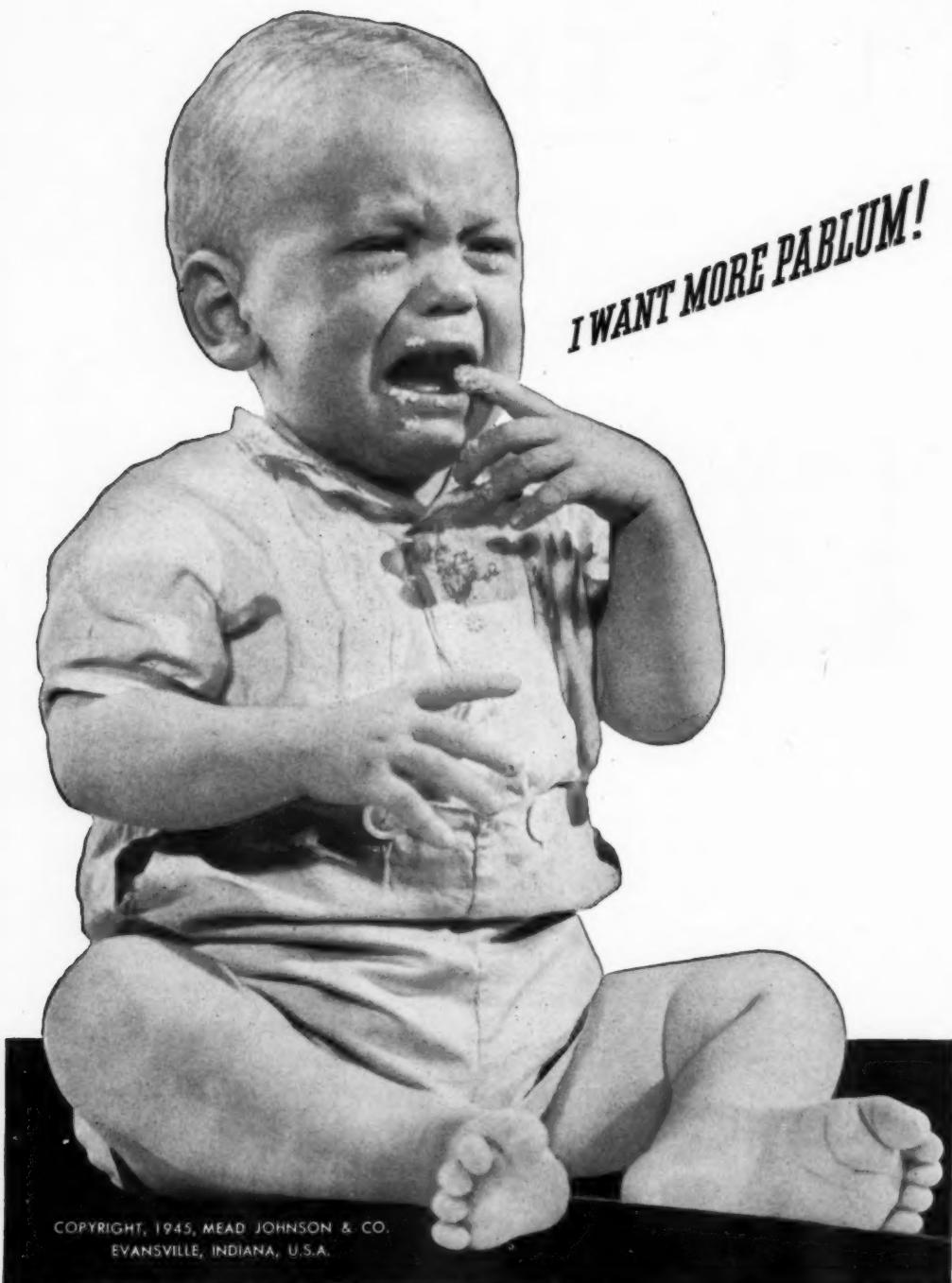
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1. Am. J. Dis. Child. 54:1227, 1937. 2. The Vitamins, Chicago, American Medical Assn., 1938, p. 624.



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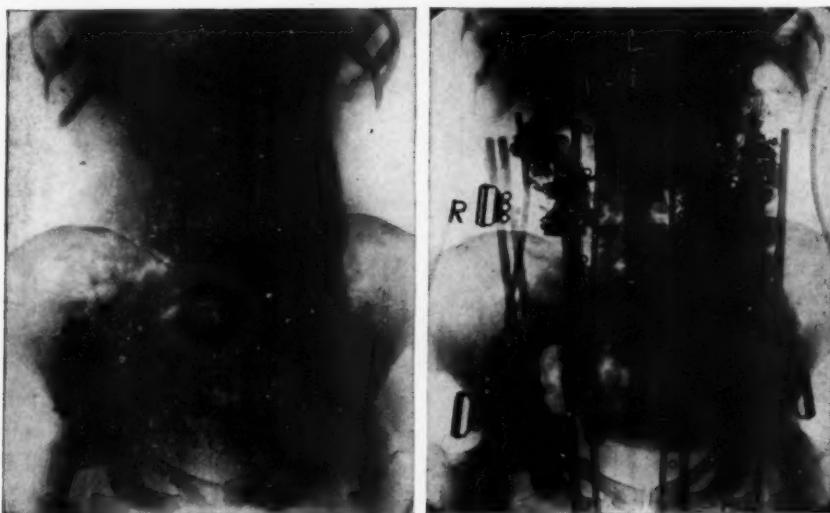
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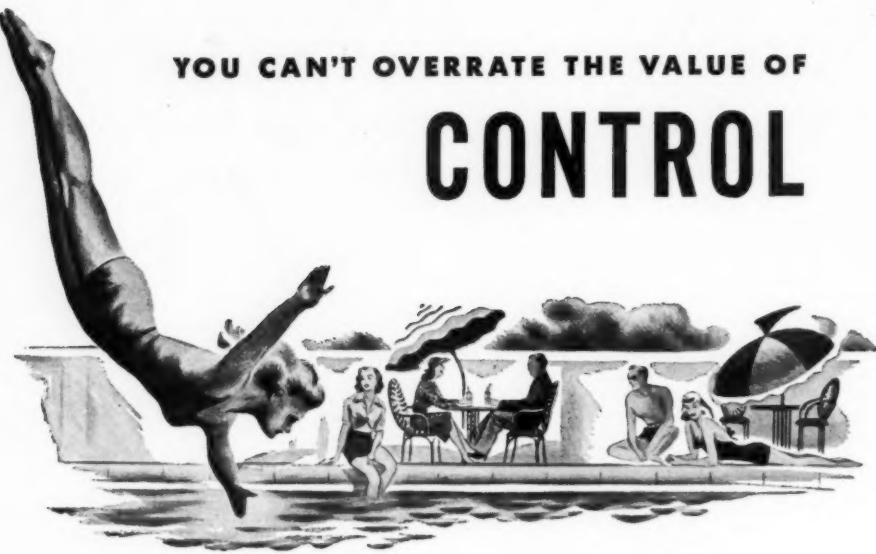
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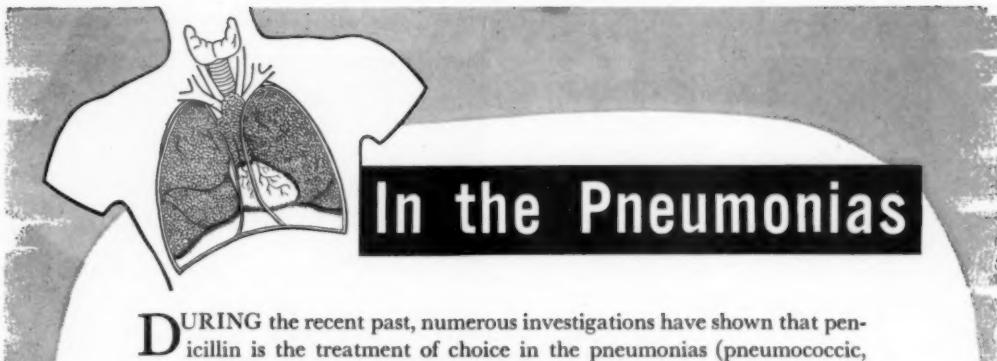
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\*Stansby, W. J.; Foss, H. L., and Drumheller, J. F.: Clinical Experiences with Penicillin, Pennsylvania M. J. 48:119 (Nov.) 1944.

McBryde, A.: Hemolytic Staphylococcus Pneumonia in Early Infancy; Response to Penicillin Therapy, Am. J. Dis. Child. 68:271 (Oct.) 1944.

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Larsen, N. P.: Observations with Penicillin, Hawaii M. J. 3:272 (July-Aug.) 1944.

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\* "During pregnancy the average normal woman gains approximately 18-22 pounds, which represents the growth of the uterus, breasts and other organs as well as the fetus and placenta. In other words, a pregnant woman in nine months reproduces tissue almost equivalent to one-fifth of her own normal body weight. It must not be forgotten that the chief function of protein is to supply the tissue-building material of the body, that the need for this material is increased during pregnancy and that the protein deficiency in the diet of the nonpregnant woman may become dangerous when maternity intervenes. . . . It is reasonable to assume that protein foods satisfy appetite earlier than the others and make it content with fewer calories. In this respect we have found high protein diets of value for weight restriction during pregnancy." (Arnell, R. E.; Guerriero, W. F.; Goldman, D. W.; Huckeby, E., and Lutz, A. M.: PROTEIN MALNUTRITION IN PREGNANCY, New Orleans M. & S. J. 95:114 [Sept.] 1942).



The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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## MESOTHELIOMA OF THE DIAPHRAGM

MAURICE ROSENTHAL, M. D.\*

and

BEN PAT FRISSELL, M. D.

*Phoenix, Arizona*

**P**RIMARY tumors of the diaphragm are very rare and only a few malignant tumors have been recorded in the literature. In 1941 Hyman and Lederer reported a case of fibrosarcoma of the diaphragm, and their review of the literature revealed only seventeen primary tumors of the diaphragm. In 1942, Ackermann reported a case of primary fibrosarcoma of the diaphragm, which was substantiated by histologic study of the tumor removed at operation. He stressed the roentgen diagnostic criteria in the diagnosis of primary tumors of the diaphragm. In the same year Arkless reported a rhabdomyofibroma of the diaphragm. In 1943, Soto reported a primary lipoma of the diaphragm and discussed his method of treatment. In 1939, Gale and Edwards reported a primary malignant tumor of the diaphragm which cannot be accepted as an authentic case since the origin of the tumor was not unequivocal as they admitted in their discussion. Ackermann also included a second case of primary tumor of the diaphragm in his 1942 report which also cannot be accepted, as it was based only on roentgenographic study. Therefore, to date twenty-one cases of primary tumors of the diaphragm have been reported, of which ten were malignant primary tumors. Five of these were diagnosed as myogenic sarcoma, two as fibrosarcoma, one round cell sarcoma, one fibromyoma sarcoma, and one was classified as a sarcoma, the author not stating the specific cell characteristics. Therefore, any additional information on this rare pathologic change should be recorded.

### REPORT OF CASE

**CLINICAL HISTORY:** The patient was a white female, 80 years of age. Her chief complaint was paralysis of the left upper and lower extremities, following cerebral hemorrhage which occurred 6 weeks ago. During the past ten years, the patient stated that she had had two or three cerebral strokes. The patient was admitted to the hospital with an acute upper respiratory infection.

**PHYSICAL EXAMINATION:** The chief findings were dullness over both lung bases with diminished breath sounds. There were numerous scattered moist rales throughout both lungs. There was a friction rub in the region of the right lower lobe in the axilla. The heart sounds were low in intensity, and the rate was 100 per minute. The abdomen was large and flabby. No masses could be palpated. There was no edema of the ankles. The laboratory data was as follows: urine showed 25-30 white blood cells per h. p. f.; 10-15 hyaline cast per h. p. f.; and 2-5 granular cast per h. p. f. There was one-plus albumen. The R. B. C. was 3,760,000 the W. B. C. was 14,950; the differential was essentially normal; and the H. B. was 71% (S). The N. P. N. was 36 mgms. per 100cc of blood. The blood serology was negative. The temperature fluctuated between 99° and 103° until several days before her death, when it began to rise and reached its peak of 106° at the time of death. The patient expired 12 days after admission.

**NECROPSY:** The body is that of a fairly well developed female, approximately 80 years of age. No external findings of pathological significance are noted.

The lungs are emphysematous and both lower lobes present bilateral broncho-pneumonia. The heart shows moderate hypertrophy and dilation of both ventricles. The heart valves are normal. The coronary ostia are patent as are the coronary vessels. The aorta reveals atherosomatous plaques with atherosomatous ulcers in the abdominal portion. This process is most severe at the bifurcation of the iliacs. The ileac arteries also show a marked degree of arteriosclerosis.

The right dome of the diaphragm is slightly elevated. Along its under surface a large grayish-white encapsulated tumor mass is found. Grossly this tumor mass is encapsulated by a continuation of the fibromuscular serous membrane of the diaphragm. The tumor mass has produced a concavity on the superior surface of the liver.

The liver shows no other gross change of pathological significance. The gallbladder and bile passages are also normal. The kidneys are decreased in their capsules strip with slight difficulty, presenting numerous irregular shaped scars and a finely granular intervening par-

\* From the Department of Pathology, Good Samaritan Hospital.



Fig. 1



Fig. 2

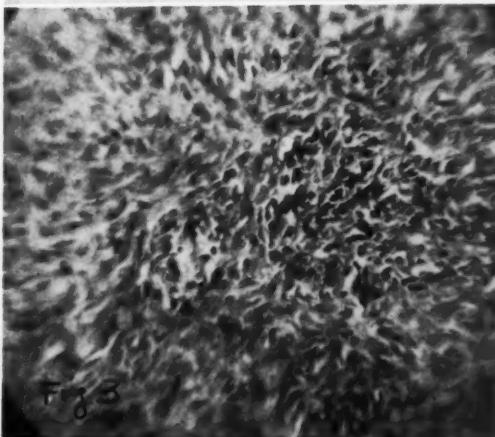


Fig. No. 1—External surface of tumor showing smooth gray capsule which is continuous with the diaphragm.

Fig. No. 2—Photomicrograph showing spindle fibroblastic type of cell on the periphery and cells of epithelial morphology in the center.

enchyma. The spleen is small and atrophic in appearance. The adrenals and pancreas show no gross change of pathological significance. The gastro-intestinal tract reveals only a moderate degree of congestion of mucosa.

Upon examination, the brain shows old organized hemorrhage and hemorrhagic cysts of the right hemisphere, involving the basal nuclei.

#### Anatomical Diagnosis:

1. Fibrosarcoma of the diaphragm.
2. Hemorrhage, cerebral, right hemisphere, organizing.
3. Arteriosclerosis, generalized.
4. Nephrosclerosis.
5. Bronchopneumonia, bilateral.

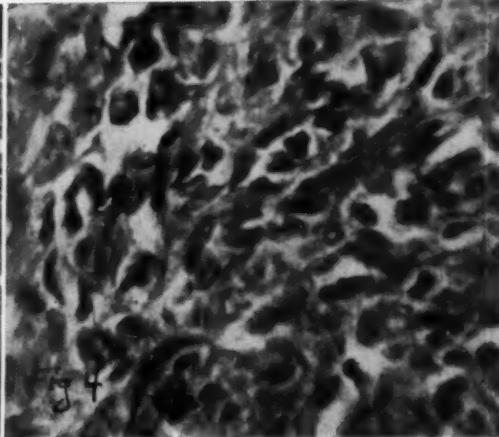


Fig. No. 3—Cross section of tumor showing numerous irregularly-shaped channels.

Fig. No. 4—High power photomicrograph showing tumor cells which are of epithelial morphology and are forming intercommunicating channels. Note signet-ring cells.

**Macroscopic Examination—tumor:** The specimen consist of a roughly oval-shaped, firm, tumor mass which measures 10 x 15 x 8 cms. The surface presents a light-grey, smooth capsule which is continuous with and arise from the diaphragm. The cut surface shows that the mass is divided transversely into two portions by a thin fibrous tissue septum. The larger portion measures 9 cms in length and the smaller portion measures 6 cms in length. The surface is light yellowish-grey in color and presents a fasciculated appearance which is most prominent in the larger portion. The smaller portion presents numerous irregularly shaped channels, most of which appear to be collapsed. Some of the cystic spaces are filled

with a dark reddish hemorrhagic-like material. The capsule is 2 to 3 mms in thickness and present a compact fibrous tissue appearance of circular fibers.

**Micropscopic Examination—tumor:** Sections through the periphery of the tumor mass including the capsule show that the tissue consists of numerous elongated, spindle-shaped cells. Separating these cells, a loose, fibrillar material is found. With van Gieson's stains, these areas present numerous areas of collagenous fibers. Some of these are found to be in thick, coarse bundles, or strands, and in some places they appear to be fused into homogenous masses. With Weigert's stains, small strands of fibrils are found between fibroblastic cells. In other areas, the fibroblasts, the collagenous fibers and the fibrils form a basket-weave arrangement. The tissue neighboring this capsular tissue is highly cellular and the cells present the morphologic characteristics of endothelial cells, which are arranged in solid sheets and whorl-like formations. In some places the transformation of these cells into epithelial cells showing a secretory activity, are seen. Here, some of the cells present signet-ring characteristics. Sections from the smaller portion of the tumor mass show large channels in which numerous villus-like processes are seen projecting into the lumen. These villi are lined by endothelial-like cells, which in some places are also showing the transition into epithelial cells with signet-ring characteristics. The stroma of the villi is comprised of spindle-shaped, fibroblastic-like cells. Some of the epithelial cells formed gland-like structures with inter-communicating channels. The chief histologic characteristics, therefore, of this tumor shows a varied type of cell morphology. Transitions between cells of spindle shape fibroblastic form, endothelial-like cells forming channels, and lining vallae, and epithelial cells producing globules of secretion, are seen.

#### COMMENT

The diaphragm is a thin musculo-fibrous septum. The greater portion of the under surface of the diaphragm is covered by the peritoneum. The upper surface is covered by the pleura. The serous membranes, therefore, although the continuing reflections of the pleurae and peritoneum, are actually an anatomic part of the diaphragm. Therefore a tumor arising from the muscular, tendinous, serous mem-

branes, or any other anatomic structures of the diaphragm, should be considered a primary tumor of the diaphragm. This is especially true when the tumor is part of the diaphragm, presenting a continuous capsule intimately associated with the diaphragm, and free from organs.

The part of the mesoderm which lines the peritoneal and the pleural cavities is histologically an epithelium but differs in some respects from other types of this tissue and is called mesothelium. The mesothelium is the simple squamous cell layer which covers the surface of all serous membranes. The prospective potencies of these cells are of a double nature. They may give rise to epithelial or fibroblastic cells. For example, in tissue cultures, the mesothelium may show a purely epithelial type of growth, arranged in islands or sheets. On the other hand, in inflammatory reactions, the mesothelial cells may give rise to typical fibroblasts that are connective tissue cells. Originally the term endothelium was used to include the mesothelium. However, the name endothelium is usually reserved by histologists for the simple layer of squamous cells which line the inner layer of the walls of the blood and lymph vessels and of the heart.

Since the mesothelial cell is a multipotential cell, tumors arising from this cell may present the characteristics of mixed tumor. The pleomorphic nature of the growth warrants its classification in a group separate from tumors arising from either fibroblastic or epithelial elements. Furthermore, it is not necessary to assume an origin from two types of cells. Thus, it seems proper to classify the mixed tumors, arising from the serous linings, as mesotheliomas. Furthermore, cells of epithelial morphology or of fibroblastic forms, may predominate, but this does not alter the basic nature of the tumor. Thus if the gross and microscopic characteristics of a tumor suggest an origin from mesothelioma cells it should be properly classified as a mesothelioma, and not as an endothelioma, carcinoma or fibrosarcoma.

#### SUMMARY

1. A case is reported of a primary malignant tumor arising from the pleural or peritoneal surface of the diaphragm.

2. The mesothelial cell is a multipotential cell which can differentiate into epithelial or fibroblastic types as illustrated by the case reported.

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## RATIONAL BASIS FOR ENDOCRINE THERAPY

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THE rational use of the drugs of endocrine origin depends upon the knowledge of their physiological and pharmacological action. A review of such action should therefore help us in evaluating the various products that are offered to us by drug companies. The futility of employing the drugs on a purely empirical basis is evidenced by the fact that we are continually trying a new product, advocating it enthusiastically only to drop it in favor of a newer one. Since comprehensive review of the endocrine glands is clearly beyond the scope of this paper, only those with direct or indirect sexual properties will be considered. Neither will an attempt be made to cover these in all their aspects. Rather, I will confine myself chiefly to the physiology of the various hormones, the form in which they are commercially available, and the general limitations of the products.

The hormones of the thyroid gland is considered the most important of those having an influence on sexual physiology. Of all the drugs used in the treatment of functional menorrhagia, thyroid is probably the most reliable. Clinical hypothyroidism will not necessarily be present. A. B. M. R. should usually not be the deciding factor in its use for disorder of the female reproductive system. Thyroid should be given in gradually increasing dosage, sometimes even to the point of tolerance, always remembering that it takes approximately ten days to achieve a maximum effect. Note should be made also that some products especially the Parke Davis products are fifty to one hundred percent stronger than USP strength and this should be taken into consideration when prescribing thyroid. Indications for use of thyroid in this respect include functional menorrhagia, especially in young girls, amenorrhea, sterility and habitual abortion.

Next to be considered are the hormones of pituitary origin. Since the action of the two hormones of posterior pituitary gland, pitressin and pitoein are well known and the indications for such rather clear, they will be passed over at this time. Of the various hormones or factors of the anterior pituitary, three are of direct interest to us here. The first of these is the lactogenic hormone or prolactin. This drug pro-

duces lactation in a breast sensitized by estrogen and progestin. The hormone is inhibited during the course of pregnancy by the estrogens which are produced in larger amounts by the placenta. Upon delivery of the placenta, the estrogenic titer of the blood drops very rapidly and the prolactin then stimulates the breast to milk production. Therein lies the basis for the use of estrogenic substances such as stilbestrol in inhibiting lactation when the baby is not to be breast-fed. The drug must be given soon after delivery and in rather large doses, 5 to 15 mgm daily for 3 to 4 days. The drug prolactin is available commercially by that name. It is occasionally used to stimulate greater milk production but is rather expensive. It has also been tried in the treatment of functional menorrhagia without a great deal of success.

In more common use are the gonadotrophic hormones of the anterior pituitary gland. There are probably two separate gonadotrophic hormones, namely the follicle stimulating hormone and the luteinizing hormone. In the normal female adult the follicle stimulating hormone is responsible for the production of follicles by the ovary. As the follicle develops, estrogen is given off by the follicle which in turn inhibits the further production of follicle stimulating hormones by the pituitary gland. Upon rupture of the follicle and ovulation the luteinizing hormones stimulate the ovary to a production of corpus luteum and the production of its particular hormone, progestin. As the corpus luteum degenerates and the estrogen titer of the blood becomes less, the follicle stimulating hormone is again released and the cycle is repeated. In the event of a pregnancy, estrogen is produced in large quantities by the chorionic tissue of the placenta and the pituitary gland is inhibited from production of follicle stimulating hormone and further ovulation ceases.

In the male the follicle stimulating hormone is responsible for the development of the seminiferous tubes and spermatogenesis. Lutenizing hormone stimulates the interstitial cell of the testes to the production of testosterone.

In addition to the gonadotrophic hormones of the anterior pituitary gland, similar substances are produced by the chorionic tissues of the nor-

mal placenta and chorionic tumors. These are referred to as the chorionic gonadotropic hormones, A. P. L. or anterior pituitary like hormones. There are commercially available products of both types and their similarities and differences should be clearly understood.

Of the products of pituitary origin there are few, chiefly because of the large number of glands that must be extracted to obtain the hormone and the difficulty in obtaining a pure product free from other pituitary hormones. The most commonly used product of this type is that sold by Parke-Davis under the name of Synaploidin. Synaploidin is a combination of pit and chorionic gonadotrophine. Gonadophysin (Searle) is an extract of fresh anterior pituitary glands.

Of the chorionic gonadotropins, there are two classes. The first is the hormone obtained from the urine of pregnant women. The hormone is present in large amounts in such urine and is incidentally the basis for the A. Z. and Friedman pregnancy tests. It is not truly an APL hormone inasmuch as it produces absolutely no follicle stimulation, but only a luteinizing action. This should be remembered when using products of this type in the hopes of treating amenorrhea or sterility successfully. Commonly used products of this type are Antuitrin S, of Parke-Davis, Follutein (Squibb), and Korotrin (Winthrop).

The second type of chorionic gonadotropin hormone is that extracted from the serum of pregnant mares. This differs from the human type in two ways. First, it is a very large molecule and is not excreted in the urine. Therefore, when injected, its action is prolonged. Secondly, it resembles the anterior pituitary hormone much more closely in that it is capable in experimental animals of producing ovulation. A commonly used product of this type is Gona-dogen (Upjohn).

The usual indications for these hormones are: Amenorrhea, especially that of the primary type; (2) Functional menorrhagia and metrorrhagia; (3) Sterility. The use of these hormones in all of the above depend upon their ability to produce follicle stimulation and ovulation by the ovary and in this way establish a normal cycle.

Now let us examine the known facts concerning each type. First, the hormone of glandular origin. It has been proven that ovulation

can be produced in experimental animals by this product. It is believed by many that they can produce ovulation in humans but no one has ever been able to prove this. It is hoped that when more potent products than any at present available are produced that human ovulation can be stimulated. At the present time, most authorities agree that ovulation is probably not produced in any appreciable number of cases.

As for the hormones from human pregnancy urine, follicular production is obtained in neither humans or animals. The rational basis therefore in most cases for the use of such drugs does not exist.

The hormone from pregnant mares serum is capable of producing ovulation in experiments with animals, especially monkeys, but no production of ovulation in humans has ever been substantiated. Most authorities agree that they probably do not in the majority of cases. However, of all available ones, it is most likely to do so.

The use of these drugs in most cases then is based only on the hope that they may produce ovulation and the results are as a rule no more spectacular than the indications, although it would appear that in occasional cases they are efficacious.

Of greater clinical value are the hormonal products of the ovary. Of these the estrogens will be first considered.

The term estrogen is applied to a group of compounds possessing estrogenic activity. The term therefore does not refer to a particular substance but to compounds having common actions on the female genital system. The estrogens are of two main classes, first the naturally occurring, and secondly the synthetics, chiefly diethylstilbestrol.

In the body, the naturally occurring estrogens are from three main sources.

- (1) The granulosal cells of the graafian follicles of the ovary.
- (2) Small amounts of estrogen are produced by the corpus luteum.
- (3) Large amounts of estrogens are produced by the placenta. During pregnancy, estrogens appear in the urine in large amounts and this is the chief source of natural estrogens, either from urine of pregnant women or pregnant mares.

Natural estrogens exist as three closely related substances. First, and probably the form in which they are produced by the ovary is estradiol. This is the most potent form and is marked chiefly for parenteral use as estradiol dipropionate and benzoate. Example: as Di-ovocyclin (Ciba), Progynons (Schering), Dimenformon (Roche). A recently released product which is very potent orally is Ethinyl estradiol of Schering. The other forms of the natural estrogens are estrone and estriol, which are probably break down products of estradiol. Estrone is marketed under that name and also as theelin. Estradiol is approximately 10 times more potent than estrone which is in turn about 10 times more potent than estriol.

The estrogens are responsible for a number of important actions. First, they stimulate the female genital system and are responsible for the production of the secondary sexual characteristics. Secondly, they are responsible for the cyclic proliferation of the endometrium of the menstrual cycle. Following a normal menstrual period the ovary develops a graafian follicle under the influence of the follicle stimulating hormone of the pituitary gland. As the follicle develops, estrogen is given off in increasing amounts. The estrogens stimulate the proliferation of the endometrium. This phase of endometrial regeneration is termed the estrogenic or proliferative phase of the cycle. Upon rupture of the follicle a corpus luteum is developed which produces its particular hormone progestin. The endometrium enters the secretory phase under the influence of this hormone. If a fertilized ovum does not become implanted, the titer of estrogen and progestin falls and menstruation again ensues. Whether the phenomenon depends entirely upon the estrogenic level or upon both of the hormones has not been conclusively proven. Thirdly, and a very important action to remember, they are inhibitory to the function of the anterior pituitary gland.

The indications for the use of the estrogens are much more clear cut than those of the gonadotrophins. They include the treatment of menopausal symptoms, senile vaginitis, functional bleeding, and amenorrhea. For all except the latter there is a rational basis. To use them in the treatment of amenorrhea is hardly rational. To use them thus may produce a temporary episode of bleeding by stimulating the endometrium, but at the same time, the FSH hormone

of the anterior pituitary gland is inhibited and hope of production of follicles by the ovary and the establishment of a normal cycle is interfered with and the very purpose for which they are given is defeated. To use them in women who are menstruating normally such as in treatment of dysmenorrhea is similarly irrational since they inhibit FSH production and thus upset the normal cycle. Although they are useful in stopping episodes of functional bleeding they do not correct the fundamental cause.

To the products of the corpus luteum is given the name progestin. This being a general term applied to all substances having luteal action, whether they be produced by the corpus luteum or by the placenta. The term progesterone is reserved for the pure crystalline substance whether it be obtained from the extraction of corpus luteum or by synthesis. The hormone is available in numerous forms, usually in oily suspension under the name progesterone or such trade names as Lipo-Lutin. A form of the drug pregnenolone is also available as oral corpus luteum. Its potency by this route is doubtful. Indications are:

- (1) Habitual abortion
- (2) Threatened abortion
- (3) Dysmenorrhea
- (4) Functional bleeding—its acts only as a substitution therapy in functional bleeding and its value is doubtful.

The last of the hormones commonly used are the Androgenic hormones. The name testosterone refers to the pure crystalline product obtained either from testicular extracts or by synthesis. Androsterone refers to a substance with similar action found in urine and probably represents a breakdown product of testosterone. The term androgen includes all of these products. They are used clinically in gynecology chiefly because of one specific action, that of pituitary inhibition. This is believed to be the basis for their efficacy in controlling functional bleeding. In this respect they are very reliable. Their danger lies in the fact that it sometimes takes dangerously near a masculinizing dose to produce a satisfactory result. Occasionally menopausal symptoms will be alleviated by these drugs which have not been helped by estrogen. The dosage should be limited to not more than 300 milligrams in a month.

- (1) There is little rational basis for use of

many of these drugs, especially the gona-dotropins.

(2) Hormonal empiricism with relatively impotent organotherapeutics substances was safe enough. But as more and more potent products are made available, continued empiric use can do great harm.

(3) The estrogenic substances are the most valuable of these drugs when used properly.

(4) The male hormones are of value in treating certain gynecological disorders but their dangers, especially masculinization, should not be overlooked.

## HOW THE PRESS AIDS THE HOSPITALS TOWARD BETTER PUBLIC RELATIONS

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IT'S still true that you get out of any program exactly what you put into it. With reference to my subject, "How the Press Aides The Hospitals Toward Better Public Relations" the application is this: The press can aid the hospital in better public relations in exact proportion to the degree in which the hospital relays to the press a picture of its newsworthy and worthwhile accomplishments.

To begin with, let's have a word about the term itself.

While public relations are as old as the hills, the phrase used in description came into general use during that golden era just before the financial doomsday of 1929.

At that time advertising men began to call their customers "clients." Undertakers became "morticians", plumbers were "sanitary engineers" and press agents became "public relations counsellors."

So in the beginning, it appears, public relations was merely a pretty name for publicity.

Even then, however, there were some businesses and professions that were doing a new kind of management, although most casual observers, deceived by surface showings, concluded that public relations differed from press agency only in the people it served.

Press agents worked for producers, actors, prize fighters, writers, lecturers, yes, even for politicians.

But if a new leader was to be created, or if a leader already too well known was to be deodorized, the job of putting across the desired effect was popularly referred to as public relations.

Then along came 1929. Business of all sorts, and that included the professions, took a fancy nose dive. The American people were facing unique and chaotic conditions.

When in trouble, human nature looks for a scapegoat and as the panic wore on, the public turned on business like a mad dog. Employers were caught in a cross fire from hostile public opinion on one side and from the witch burners of business on the other.

Frantically business sought to restore public confidence and quickly revised its concept of public relations.

Slowly at first, but with mounting rapidity, business and professional men of all sorts began to reflect that public relations might not be the name for a sissified perfume, but might be the label of the very tonic that was so desperately needed for recovery.

They began to realize that public relations, instead of being a rather hazy method of pleasing people in a hit or miss fashion, should and could be an exact science of creating and maintaining the greatest asset of any individual or profession the goodwill or the public.

It was at that precise moment that public relations became an operating philosophy, to be applied in everything an up-to-the-minute organization does.

It became the art of getting along with the public all the time and not just a stunt, or feat of clever manipulation, to meet an emergency or special occasion.

And this concept has changed the thinking of the American public. No organization is too large or powerful to ignore the insistent need for good public relations.

In fact, the larger the group or organization, the greater the need for carrying a wholesome, truthful picture to those whom it proposes to serve.

What has all this to do with hospitals? A great deal, I believe.

Every hospital, perhaps, should realize the importance of public relations and then set up a plan to insure that they shall be good instead of bad. You're bound to have them one way or the other. The quality depends on the public relations machinery set up in each institution.

What's being done along this line now?

Well, in Phoenix, the situation is probably the same as in most other parts of the country. News emanating from our local hospitals is mostly routine.

Once or twice a day the police reporter from each newspaper calls the hospitals to check on accident cases, emergencies of one sort or another, of the condition of an exceptionally well known patient.

He wants to know whether Joe Doakes, knifed between the ribs last Tuesday, is still alive.

And then, once a year, each hospital has a graduating class and gets to the paper a list of the graduate nurses.

In the good old days, before metal and newsprint shortages, we also printed pictures of the individuals. I hope it won't be long before we can do that again.

This is the routine news and, of course, it's important. But it seems to me there is a much wider field of hospital news which in many cases has remained practically untouched.

I'm not referring to propaganda stories, of pure publicity designed merely to sell the virtues of an institution. That's advertising and is an entirely different field.

I mean genuine news or news features which would be interesting to our readers and, incidentally of value to the hospital.

Suppose, for example, that the Phoenix hospitals, jointly or as individuals, were to assemble as the basis of a news story the excess demand made on them during the past year or two.

The number of patients handled during 1943, for instance, as against the total in the last pre-war year. Such a story could enumerate the maximum facilities of the hospital, the situation as it pertains to the number of doctors and nurses available and other factors which make the situation difficult as of today.

Might not such a story bring to the rank and file of Phoenix residents a better understanding of what you people are up against and lessen the criticism which a lack of understanding inevitably brings?

It might even result in many borderline cases deciding to remain at home rather than unnecessarily clutter up a hospital room. That in itself might be a worthwhile objective.

I'm also convinced that many a human interest story might be relayed to the local newspaper by hospital personnel. Stories which would make interesting reading and in which the hospital's name could legitimately be used in a manner to enhance its public relations.

Please don't misunderstand me. I don't propose to say that these things are not frequently done.

On the contrary, they are. In Arizona we have an outstanding example of the awareness of good public relations. I refer to the Sage Memorial hospital at Ganado. That institution, farther removed from civilization than any other, nevertheless is one of the best known.

Why? Because it gets to Arizona newspapers the interesting facts which happen there and which makes news. I recall, for example, the story several years ago of an Indian child, injured on the Navajo reservation, whose life was saved by treatment in an iron lung.

Many of you may remember the story. It made colorful copy for days. Legitimate copy in which our readers were avidly interested.

How could we in Phoenix have learned of those circumstances except through the intelligent and helpful co-operation of the hospital?

And, very importantly, the personnel there does this regularly, consistently. Not all the stories we get from there are as interesting or colorful as the one I mentioned, but they all are newsworthy, or they wouldn't be printed. Year in and year out, you'll find the Sage Memorial hospital in the news.

That sort of public relations, and I submit it's worthwhile, must stem from the top. It doesn't happen by accident. IT MUST BE PLANNED.

On this occasion, I'd like to make a plea to all hospital personnel to take the press fully into your confidence.

Please remember that a newspaper worthy of the name must, insofar as it's humanly pos-

sible, print all the news to which its subscribers are entitled. That's a mighty big order and covers a lot of ground.

There are all sorts of news stories. Some are cheerful, some sad. Some tell of good deeds, others of evil. The newspaper must print all of them that constitute news.

Now it's only natural that organizations, no less than individuals, would rather see in print a story that reflects sunshine instead of shadow. It's always a temptation to withhold facts it is BELIEVED might be harmful or unpleasant.

May I ask this? If the FACTS constitute news which ordinarily is used, don't make the mistake of withholding it.

For believe me, it IS a mistake.

An example: Sometime ago, a patient in a local hospital jumped or fell from a second or third floor. He died.

The newspaper did not get the story the day it happened. We had some difficulty getting the facts the following day. Now here's what happened:

Before we did get the story into print, the news room received three telephone calls assuring us that at the hospital in question there had been three suicides in a week.

The callers insisted their information was

correct and wanted to know why we were suppressing the story.

That's a sermon in itself.

We want to be as helpful as we can. If the governor is taken to a hospital, we name the institution. We should. It's part of the story.

At the request of the hospitals, we do not mention them by name in ordinary death cases. That's proper, too because it isn't important.

Of course, if the president of the United States were to be hospitalized in Phoenix and were to die here, the circumstances would be entirely different.

In that case we would not only mention the hospital by name, but the story would give the number of the room in which he was a patient, the name of the attending physician and that of the nurse, if we could get it.

The things I have said here are highlights only, but I hope they may be helpful in some manner. You fine folks have been very kind and patient and I won't presume on your hospitality by being long winded.

Seriously, let me repeat that you can get out of a public relations program only what you put into it. Outline a concrete plan, follow it persistently and take the press into your confidence. I hope that here in Phoenix the newspapers will always be worthy of that confidence.

## SEROLOGY AND THE DIAGNOSIS OF SYPHILIS

THOMAS T. FROST, M. D.

*Phoenix, Arizona*

In the past serologic tests have been limited largely to persons suspected of having syphilis. With the advent of prenatal, premarital, preoccupational and preinduction tests they are being applied to tens of millions in all walks of life. Thus a reexamination of serologic principles and their application to the diagnosis of syphilis becomes an immediate need. The proper diagnosis, treatment and control of syphilis rest upon the proper employment of serologic test and on their interpretation. Many patients have been started on the long and arduous path of anti-syphilitic treatment before the diagnosis of syphilis has been adequately established, and irreparable harm has been done. Many of these needlessly treated people have become and remained syphilophobiacs for the rest of their lives.

Serologic reactions are based on the presence

in the blood of a substance of unknown nature termed "reagin" or Wassermann antibody. This substance appears in the blood in response to activity of the spirochete in the tissues and can be detected and titrated by the various serologic procedures, so that on the surface it would seem very simple; a positive test means syphilis, a negative test, no syphilis. Actually however, it is much more complex than this. In the first place the reagin is not a specific substance. It is normally present in the blood of certain lower animals, it occurs as a result of other infections, and it is not always present in syphilis. Kahn<sup>1</sup> has shown that the aggregates that occur in the Kahn test are present in ultramicroscopic size in the bloods of a large proportion of normal people and that in syphilis these aggregates become large enough to

be seen grossly in the test tube. The mere presence of the spirochete in the body is not sufficient always to produce reagin as evidenced by the sero-negative primary stage.

In general it may be said that the presence of reagin follows the general pattern of immunity reactions. In typhoid fever the Widal does not become positive as soon as the patient ingests typhoid bacilli, but only when the disease has established itself and the body has begun to produce immune bodies, some ten days or two weeks after the clinical appearance of the disease. Likewise in syphilis the blood does not become positive until six to eight weeks after the invasion of the spirochete. By this time the spirochetes have been carried by the blood to all the organs of the body, and have been in residence for some time. It is only when the body begins to resist them that the blood begins to become positive. In the second stage, the body is acutely aware of their presence, the damage is conspicuous and widespread, and the serology is uniformly positive in all cases. As the development of immunity increases, the activity of the spirochete becomes limited to localized areas or may become quiescent, and as a result about 20% of cases no longer show a positive reaction. Adequate treatment results in negative serology in a large majority of cases. Occasionally a negative serology cannot be obtained in spite of adequate or super-adequate therapy. This is thought to be due to continued activity of the spirochete at some site in the body, frequently the central nervous system.

The problem which concerns us most at this time is the question of the positive reaction that occurs in the absence of clinical syphilis, or that occurs in routine testing. Does such a result mean syphilis or can it be due to something other than syphilis?

First let us examine the serologic test itself. How specific are the tests for syphilis and how is this determined? The sensitivity and the specificity are determined by testing a thousand bloods from known syphilites and known non-syphilites respectively. If in the 1000 syphilites, 800 have positive test the test in question has a sensitivity of 80%. If in the 1000 non-syphilites 990 have negative test the specificity is 99%. These figures are considered to be entirely satisfactory for an acceptable test. However, if we apply this test to a population of 100,000, containing 1000 syphilites we will get

positive results on 80% of the syphilites or 800 cases, but we will also get false positive reactions on 1% of the entire population or 1000 false positives. The false positives in this instance exceeding the true positives. A drop of 5% in sensitivity would mean 50 missed cases, but an increase of specificity of 0.9% would reduce the false positives to 100, a more reasonable figure. It is easily seen that a specificity of 100% must be the ultimate aim of all serological procedures. This does not seem possible because these test are positive under certain circumstances in a wide variety of conditions.

Kolmer<sup>2</sup> has listed 30 diseases other than syphilis in which serologic reactions may be positive. Rein<sup>3</sup> in a recent study of false positive reactions in the army has made the following interesting observations. Six tests were used, the Kline diagnostic, the Kline exclusion, the Boerner-Jones-Lukens, the Mazzini, the Kahn and the Kolmer Wassermann. 129 soldiers vaccinated for smallpox were tested during the first, second and third weeks after vaccination. 52% having a vaccinia reaction had positive serology, 20% were positive. In leprosy 85% of 80 patients a total of 44.9%. 86% of these reactions occurred during the second week.

Of 72 patients with primary atypical pneumonia verified by x-ray evidence, 17 or 23.6% were positive with two or more of the tests, 7 strongly positive and 10 with low titre. 36 of these patients were also tested for psittacosis with a complement fixation test and 19 were positive, three with a high enough titre to be considered diagnostic of psittacosis. Of 79 patients with miscellaneous upper respiratory infections such as influenza, pneumonia etc., 20% were positive. In leprosy 85% of 80 patients were positive with two or more tests, the majority strongly positive. In filariasis 11.3% of 53 patients were positive. In Weil's disease 43%, in malaria 44% and in typhus fever 39.4% of the patients gave positive reactions. These then are all false positive reactions, many of them of diagnostic intensity. What are the factors involved in the false positive reactions? As a result of studying these cases Rein arrived at several conclusions. (1). There are apparently certain individuals called serologic reactors, who will produce reagin as a result of a nonspecific stimulus. This is illustrated by the observation that some of the soldiers with minor vaccinoid reactions gave strongly positive serology while

others with severe vaccinia reactions were negative. The same effect occurred in the other diseases. There is no relation therefore between the severity of the disease and the occurrence of positive serology, the factor seeming to lie in the particular individual. (2). Certain diseases are more prone to produce positive serology than others. Notorious are leprosy and malaria. (3). The false positives usually occur between the 7th and 21st days of the disease, hence showing a definite incubation period. Blood drawn in the period of incubation are more apt to be positive. (4). The number of test employed affects the number of false positives as certain serums will be positive with one test and negative with another. The best way to get a large number of false positives is to use a large number of tests. (5). The type of tests also affects the results. Primary atypical pneumonia, upper respiratory infections and smallpox vaccination rarely give false positives with the Kolmer Wassermann but frequently do with the flocculation tests whereas leprosy and malaria give more frequent false positives with the Kolmer Wassermann. The Hinton test gives the lowest incidence in malaria. (6). The interval between tests affects the number. Some of these reactions are of short duration and will be missed by infrequent testing. They all tend to become negative with time. Those that are 1 plus in 1-2 weeks. Those that are 4 plus in 2 to 3 months but occasionally one will remain positive for several years thus leading to great potential diagnostic difficulty.

So far it has been presupposed that an acceptable test is being performed by experienced people on properly collected blood. Under the best conditions and in the laboratories of author serologists serologic tests vary from day to day both in sensitivity and in specificity for reasons that are unknown at the present time. Fortunately this variation is for the most part of small degree, and because of their simplicity is less in the flocculation tests. The tests are also possessed of a somewhat greater sensitivity at no loss of specificity and are less subject to technical error. There is a strong feeling today among serologists that the materials for the performance of serologic tests be standardized by some central agency so that tests run in different laboratories will be less subject to variation. The maintenance of satisfactory levels is greatly aided by correlating the clinical picture with

the serologic results. If the laboratory knows that certain bloods are from untreated cases of florid secondary syphilis it will know that something is going wrong if positive results are not obtained. Knowledge of the clinical stage of the patient is one of the best controls of the serologic reaction. Therefore all serologic requests should be accompanied by some statement as to the clinical state of the patient.

The unfortunate part of the false positive reaction is that it occurs out of a clear sky in a routine test in a patient not clinically suspected of having syphilis. What to do then, when this happens? The thing most commonly done is to repeat it promptly, and frequently to send the blood to as many different laboratories as are available. This is almost sure to result in utter confusion. I recall one case in which the serologic results ran all the way from 4 plus to negative on the same patient within the space of several days. Verification tests have been developed and are in use attempting to establish the true nature of this type of reaction. At present there is no verification test that always gives a syphilitic type reaction with known syphilitic serum or that always gives the false positive type of reaction with known non-syphilitic serum. They make mistakes in both directions. This places the responsibility of proving or disproving the diagnosis of syphilis where it belongs, on the clinician's shoulders. The patient should have a detailed diagnostic study directed not only to elicit syphilis but to elicit any recent disease that might cause a false positive. This should include careful questioning and a complete examination with particular attention to the cardiovascular and central nervous systems, radiologic studies of the heart and aorta, spinal fluid examination to rule out symptomatic neurosyphilis, examination of contacts and repetition of serologic examination. If the serology is strongly positive, quantitative methods should be used and the patient should be followed serologically and without treatment for three months at least, with serologic test every two to four weeks. A continuing drop in serologic titre without the administration of antisyphilitic treatment is strong evidence of a false positive reaction. Additional laboratory work such as blood counts and smears, Paul Bunnell test, sedimentation rate and specific complement fixation, agglutination and precipitation test to

(Continued on page 857)

# ARIZONA MEDICINE

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## Editorials

### Our Public

Elsewhere in this issue appears an Editorial reprinted from the *Tucson Daily Citizen* on the subject socialized medicine. The medical profession is receiving commendable comment from many sections of the lay press thruout the nation. But it also receives its share of criticism and ridicule. The latter comes from the so-called yellow press, and the sensational writers. Or from some editor or publisher who has a personal grudge, or ax to grind, and to satisfy his own whims, would abolish the achievements of laws to protect the public health. It is a sickening experience to walk into a morgue and see a high school student who has died of pneumonia, or diphtheria. But such instances still occur in spite of the medical profession's efforts to raise the standards of those who are entrusted with the care and health of the public.

The medical profession does not have to go to the lay press or outside the profession to hear ridicule poured upon it. The National Physicians Committee recently completed a nationwide survey of opinions of 115,000 physicians in the United States. 12% of all these doctors, or 13,800 believe that the enactment of such legislation as the Wagner-Murray-Dingell Bill would be a "good thing". An encouraging part of this same survey was that 98,800 or 86% of all doctors were familiar with this proposed legislation. It is members of this minority group who always make the headlines. A prominent Eastern physician who apparently is more adept

with the English language, than with the modern day armamentarium of medicine, or present medical statistics, suddenly discovered, among other things, that maternity hospitals and nurseries were all wrong. That babies would be better off if they were borne at home. Further, that the majority of children who had tonsilectomies had normal tonsils removed. One wonders just what a normal tonsil is. Then along comes a well known popular weekly magazine which is more interested in a sensational story than in facts and gives him a whole page with headlines.

None of us know exactly what is in store for the private practice of Medicine. No one can tell at this time just how near to, or how far away we are from State Medicine. The old Wagner-Murray-Dingell Bill is lost, but a new Wagner-Murray-Dingell Bill has been introduced in Congress. In commenting on the failure of his original bill, Senator Murray publicly condemned the National Physicians Committee, as the main cause for the bill's failure. While the N. P. C. has made no such claim, nevertheless they tell us they have been working along those lines. Incidentally some doctors, are unwittingly using Senator Murray's exact words in criticising the N. P. C. and refusing to donate to its activities.

It may be that a sufficient number of the American people still believe in private enterprise. They will be hearing about compulsory health insurance more and more from the politicians and the racketeers and will be finding these measures on their ballots. Economic conditions will always remain a strong determining factor. But our best advice and warning has been to keep up an aggressive campaign of educating and informing the public. To do this the State Society will spend \$5,000 this next year in radio, newspaper, and similar activities.

Even our severest critics can no longer maintain that the practice of medicine is not changing. It has already ceased to be a competitive affair. The subject of Medicine has become so enormous that no single mind can begin to comprehend it. As a result doctors are becoming more and more compelled to limit their work, in order to become adept in some particular phase or specialty. A recent book on physical diagnosis listed 29 different branches or specialties.

This evolution in medicine means that doctors are becoming more and more interdependent on

one another in their work. If this situation is to succeed along with our program of Public Relations, a solid front will have to be presented. Petty jealousies and intolerances must be forgotten. And the rough spots will need to be polished, instead of broadcasting them to the world.

There is nothing we can do about this minority group in the Medical Profession. They can be properly classed as a fifth column. But there are 101,200 doctors who understand and believe in "private medical practice" and their personal support and cooperation are essential if this system is to be preserved.

### The Backdoor

Whether or not we have a compulsory national insurance sickness bill passed by congress, the present plan of the U. S. Veteran's Administration makes provision for sufficient increase in government hospital beds to bring between twenty and forty percent of the population under a free medical service plan under the Veterans' Bureau.

Since 1939 the number of federal hospitals has increased 600 percent; the number of State hospitals has increased 10 percent; while the number of other hospital beds, (private), has increased 5 percent. In 1939 there were six times as many private hospital beds as there were federal beds; in 1944 there were practically the same number of each. The present program of the Veterans' Administration calls for sufficient development to send the number of Federal hospital beds far ahead of private.

The mushroom growth of the Veterans' Administration Hospital program is due to the fact that the immediate peak load of the casualties is used as justification for expanding the facility over the next 30 years, and the end result will be that these hospitals built to meet the needs of veterans at this time will be used for veterans whose non-service connected medical care will be given to them as a bonus for their army service.

In most cases the Veteran cannot be fully compensated for what he has given. With that in mind it can be understood that we wish to be sure that what we give the Veterans is worth giving, and wanted. Obviously, war disabilities should be given every consideration, but to take this enormous stride along the road to the Federal Government in Medicine in the name of

anything else but the government in the business is leading and deceptive. If we want something let's buy it for what it is. If we want to give the Veteran a bonus, let's give him a bonus, but not something that he will not want when he gets it, and furthermore, something that will not be good for him when he takes it.

The record for rehabilitation in Veterans' Hospitals has been shown to be poor in most instances. Wherever possible the hometown environment is found far more successful when it comes to rehabilitation.

Let the Federal Government subsidize private institutions such as hospitals wherever the need is shown. Let the Veteran go to his family physician, who will be his friend as well as his doctor. Avoid the mistake of building enormous institutions where a man is a number and frequently a zero at that.

—H. R.

### Vocational Rehabilitation

PALMER DYSART, M. D.

*Medical Consultant for*

The Vocational Rehabilitation Division State Department of Vocational Education

The Vocational Rehabilitation Act of 1920, as amended by Congress in 1943, provides a Federal-State Co-operative program, the object of which is to assist the individual who is unemployable because of a static disability to assume a useful and productive place in society. This program not only provides education and assistance in locating employment, but where indicated medical and surgical rehabilitation when needed and possible to render the client physically fit to participate. This assistance is provided by co-operating organizations set up by the Federal and State governments which provide finances and administration, and enlist the aid of Medicine, Social Service, existing education facilities, and last but not least, the employer himself who in many cases also needs re-education to the fact that the individual having a disability is not necessarily unemployable.

Physical restoration of the client is in the hands of the Medical Profession, and unlike pre-existing programs, funds are now available which pay for all services at a rate that has been set up by the Profession itself through the work of the Professional Advisory Committee which was selected by the State Board for Vocational Education from a list submitted by the Arizona Medical Association. The original

examination of the client is done by his own physician, and where special therapeutic measures are required, the client or his doctor select a specialist in that particular field who meets qualifications of the specialty board. This care is coordinated by the Medical Consultant for the Vocational Rehabilitation Division whose responsibility it is only to see that adequate care is provided that will suit the physical, educational, and employment requirements of that individual.

To be eligible for participation in the Arizona Vocational Rehabilitation program, a client must be sixteen years of age or over, a resident of the State of Arizona for at least one year, and have a static disability which constitutes an employment handicap. To receive the benefits of the training and job placement part of the program, his financial status is not considered, but to be cared for under the Physical Restoration Section, etc., he must be in need of financial assistance and care will be provided until his employment permits him to assume the financial obligations of such care.

It is not the intent of this program to take over the medical care of cases requiring protracted treatment, for the ultimate aim is EMPLOYMENT. It is not a substitute for other medical aid programs, and thus, certain limits have been defined. The condition must be STATIC. This does not mean chronic, although, due to the latitude and individualization of cases, certain chronic conditions may be included. Tuberculosis is an example of this. Acute or active cases cannot be handled for a maximum of ninety days' hospitalization and thirty days in a convalescent home may be provided with an additional thirty days' convalescent care furnished upon the recommendation of the Medical Consultant, and, it would be a poor policy to subject an active case of tuberculosis or other chronic infectious diseases to the rigor of an educational program with employment in view. When such a case, either of pulmonary or bone and joint disease is judged to be arrested, then it becomes eligible, although further medical care may be advisable such as pneumo-thorax in the one case, or corrective surgery or prosthetic appliances in the other.

Disabling conditions which render an applicant eligible for participation under this program fall in numerous categories. Medically,

they could include such conditions as allergy, cardio-vascular disease, arrested or chronic respiratory conditions, slowly progressive malignancy with a prognosis of several years of useful life, blood dyscrasias, and diabetes. Eye conditions and defects of the other special organs receive attention. Crippling conditions needing corrective surgery, prosthetic appliances and special training, and even such a condition as cholelithiasis which can be corrected by surgery are included. Restoration is not limited to physical defects, for care will also be provided to mental cases who under adequate psychiatric treatment and proper training and regime offer a favorable prognosis for employment in some type of work. The epileptic and the schizophrenic can assume a useful position in society if placed in proper employment under certain conditions such as agricultural work.

We doctors of Arizona now have the opportunity of helping in a program whose aim is to reinstate the physically disabled individual as a useful member of society and be paid for it. To those who fear the encroachment of State Medicine, it can be assured that this is a medical program on an individual basis with the free choice of doctors depending only upon the requirements of the case and the qualifications of the doctor. The medical side of this program is organized by our Medical Society which controls the medical policies, and the State and Federal governments enter into it only by providing funds and organization.

We can help with this program by keeping our eyes open for prospective cases, with the thought always in our minds, "can this case become a useful member of society if he should receive training or physical restoration under the Vocational Rehabilitation Program?" Cases can be referred directly to the Vocational Rehabilitation Division of the State Department of Vocational Education at 13 South 17th Avenue, Phoenix, or 135 South 4th Avenue, Tucson, or telephone or write, and a representative will be sent to interview the patient.

### Dr. Hill-Burton Bill

Senate Bill 191 which is known as the Hill-Burton Bill is one piece of legislation before our National Congress which is considered constructive. It has been endorsed by the Board of Trustees of the American Medical Association and by the American Hospital Association.

There are two parts to the bill. The first part would set up a sum of \$5,000,000 to assist the several States to make an inventory of their existing hospitals and to survey the need for construction of hospitals, and to develop a program for the construction of such public and other non-profit hospitals as well, in conjunction with existing facilities, afford the necessary adequate hospital, clinic and similar service to all people.

The second part of the bill would appropriate \$100,000,000 for the fiscal year ending June 30, 1946 to be used for the construction of public and other non-profit hospitals. A non-profit hospital means any hospital owned and operated by a corporation or association, no part of the net earnings of which inures to the benefit of any private shareholder or individual. This amount would be made as out-right grants. The bill places emphasis on importance of local interpretations of needs and local autonomy of administration.

### Wagner Bill Semantics

On May 24th, Senator Wagner introduced in the United States Senate a new bill amending the Social Security Act. The bill, S-1050, is a book length document of 185 pages covering every phase of social insurance. It is presumed that none can take exception to any part of the proposals without being subject to the accusation of heartless opposition to providing the underprivileged with the benefits to which they are justly entitled.

American editors are the nation's experts in the use of words. They are ever alert to safeguard the interest of the public. In a study of this document, these editors will be especially interested in the remarkable admixture of cold steel intentions expressed with softening phrases and sheer preachment and propaganda disguised as integral part of the proposed amendments.

The bill levies direct tax of 8% on all wages and salaries of all workers in private employment up to \$3,600 of annual earnings and a direct tax of 5% on the earnings of all self-employed people up to \$3,600 per year. It is estimated that this tax would produce each year a fund in excess of Eight Billion Dollars. In all likelihood this is the largest amount resulting from any single tax levy ever made anywhere at anytime. Yet, in all of the 185 pages of text, the term "tax" does not appear save with reference to refunds prior to 1946 and to

make records conform to sections of the Internal Revenue Code—pages 168 and 172. The term Social Security Contribution—page 164, is substituted for the unpopular term "tax."

Approximately \$3,142,000,000 of the total tax fund would be earmarked to provide Personal Health Services. A National Advisory Medical Policy Council is established—page 77. The Council is appointed by the Surgeon General of the Public Health Service. Its function is strictly advisory. It has authority to establish other Advisory Committees and Commissions. But, the Surgeon General is "authorized and directed to take all necessary and practical steps to arrange for Personal Health Service Benefits for all Social Security beneficiaries and their dependents"—page 72. These include general medical, special medical, general dental, special dental, home nursing, laboratory and hospitalization benefits—page 100. The Surgeon General is established by law as the agent to dispense and pay for medical, dental, nursing and hospitalization service for an estimated 110,000,000 people.

The bill states that the methods of administration shall insure the prompt and efficient care of individuals, promote personal relationship between physician and patient, provide incentives for professional advancement and encourage high standards in the quality of service—page 82. These are worthy objectives. They will be quoted endlessly by proponents of this legislation and by those who strive to establish centralized controls in the United States. They are nullified by direct proposals of the Amendments. The sacred nature of the physician-patient relationship is destroyed by the introduction of an administration and the public recording of symptoms and case histories. Professional standards are automatically and dangerously lowered when political favor takes the place of personal competence. The real incentive of the doctor is forfeited when he is made subordinate and subservient to the bureaucrat.

In the United States more than fifty million people have provided for themselves measures of health protection through insurance with private carriers. When presenting his omnibus bill to the Senate, Mr. Wagner stated:

*"There has been much misunderstanding about the part that existing voluntary insurance or prepayment plans and similar agencies may play in the Social Insurance System. Let me*

*emphasize that our bill makes a place for them to continue their good work.*

But these are the facts. Participants in voluntary insurance plans or programs are exempted from the payment of the tax on that part of their earnings that is expanded for the insurance premium—page 151. The tax to be paid by a worker earning \$3,600 per year would be \$144.00 annually. If a worker earning \$3,600 expands \$100 for any voluntary or group insurance program he would pay the tax on \$3,500 of income or \$140. Under such circumstances private insurance programs could not survive.

In introducing his Bill, Senator Wagner said: “*But health insurance is NOT socalized medicine; it is not state medicine.*” and “*I believe in the American system of Free Enterprise.*”

It is a fact, however, that under the proposals the Surgeon General of the Public Health Service, working under the Administrator of the Social Security Board, becomes the dispenser of all health care and the final arbiter of the mental and physical well being of the nation. If such a core of collectivist control is ever established in this country applying to the most sacred and vital wants of every human being it would require a miracle for free enterprise in any sort of forms to survive the impact.

These things the people should know. It is predicted that American editors will tell them. *Political Semantics has been defined as the technique of pasting soothing syrup labels on bottles of nitro glycerin.* N. P. C.

## Office of Surgeon General

Acting Secretary of War Patterson and General Kirk  
Report on Health of Army

In presenting Major General Norman T. Kirk, Surgeon General of the Army, at the Secretary of War's press and radio conference on 24 May 1945, the Honorable Robert P. Patterson, Acting Secretary of War, said in part:

The war in which we are engaged has produced many seemingly unsurmountable problems, without precedent in the development of new weapons, new methods of training, and new tactics. But none of these problems has been more difficult than the problems faced by our Medical Department in caring for the largest American Army in history, fighting in virtually all parts of the world. And yet, despite these problems, no Army at any time in history has achieved a record of recovery from and freedom

from disease comparable to that of the American Army in this war.

The Medical Department, its doctors, its nurses, its corpsmen, has saved the lives of 97 out of every 100 men wounded in battle who reach a hospital, compared with 92 in the World War. Seventy out of every 100 wounded overseas were returned to duty, and 27 were evacuated to this country.

During the past three years, the Medical Department has maintained a record of less than one death from disease per 1,000 men per year. During the World War, 19 out of every 1,000 men died each year from disease. During the Spanish-American War we lost 26 out of every 1,000 per year, and in the Civil War, 65 out of every 1,000 men died each year from disease.

In all during this war, 12,000 men died from disease from December 7, 1941, to May 1, 1945. In World War I, 62,670 men died from disease; in the Spanish-American War, 3,500 died from disease, and in the Civil War, 336,216 men of the Union and Confederate armies died from disease.

Malaria has been reduced from hundreds of cases per 1,000 men per year to less than 50. The dysenteries, which once put entire regiments and armies out of action, have occurred among less than 90 out of every 1,000 men per year and have been raidly controlled. During World War I, 38 per cent of the men who contracted meningitis died, compared with 4 per cent in the present war, and 24 per cent of those who caught pneumonia died in 1918 compared with only seven-tenths of one per cent in this war.

No greater tribute can be paid to the Medical Department of our Army than the tribute paid by its record of saving lives in this war.

It is a record written by Medical Corpsmen following the troops into battle; by doctors performing their surgery amid the bursting of bombs; by the self-sacrifice of American women in the Nurses Corps, laboring long hours under the most difficult of conditions, by thousands of other Medical Department personnel, and by scientific research and development.

The Medical Department today is well prepared for the intensification of its work brought about by the cessation of hostilities in Europe. Thousands of wounded veterans in the European and Mediterranean theater are being transported to the United States as fast as ship and planes are available. Physical ex-

aminations are being given to each of the 3,500,000 soldiers in those theaters before they are redeployed. And Medical Department personnel will be sent to the Pacific in ever-increasing number as our forces are marshalled for the final blow against Japan.

The peak of the Medical Department's activities will not be reached until the fall of 1945. At present, wounded and sick are being returned to this country from all theaters at the rate of 44,000 a month. This evacuation will continue until all of the patients in the European and Mediterranean theaters are removed, which will require 90 days.

In anticipation of this movement of patients from Europe to this country, the Army has provided seven additional hospital ships, three of which are now in service, with four more to be commissioned shortly. This will bring the total number of hospital ships to 29, with an aggregated patient capacity of 20,000. Of the 25 Army hospital ships now in operation, 18 are in the Atlantic, five are in the Pacific, and two more are en route to the Pacific.

In addition to these hospital ships, special hospital equipment has been placed aboard 24 troop transports, giving the Army an additional patient-carrying capacity of 40,000.

Eight thousand patients a month are being brought back, to the United States by plane, with three-fourths of this air traffic over the Atlantic.

The arrival of these thousands of wounded and sick in this country during the next three months will place a heavy load on our General and Convalescent hospitals. The population of all hospitals in the United States at present is 290,000. By September, this is expected to reach 315,000, taking into consideration the discharge rate.

It can readily be seen that the Medical Department will be operating at capacity for many months to come and there will be a critical need for its professional and civilian personnel during this period.

General Kirk's statement follows:

"The Army Medical Department is well prepared to maintain its record of saving lives and guarding against disease in the second phase of World War II which will be centered in the Pacific. As combat activities increase in that area troops moved from European theaters will find a different type of warfare, different

diseases and different methods of combating disease.

"The Medical Department has been preparing for years for its fight on disease in the Pacific. In addition to its intensive research into disease common to that area it has gained much value in practical application of its methods from the campaign already fought.

"In the Pacific areas our fighting men are exposed to many types of disease that are rare in the United States and Europe. However, this should not be considered cause for alarm. With proper preventive measures and medical service the disease rate in the Pacific will be kept to a minimum.

"Every fighting unit in the Pacific area has the same type of medical organization accompanying it as these in other theaters. The chain of evacuation of wounded is well organized and is very effective. Because of geographical and climatic differences certain changes were desirable, but the same high type facilities are available.

"The main disease to be encountered in the Pacific malaria, the dysenteries, scrub typhus, skin infections, schistosomiasis, filariasis and dengue fever. Excellent progress has already been made in keeping the incidence of all of these diseases to a very low degree.

"Malaria, for example, has been reduced to one-fourth its incidence in the early part of the war so that the overall death rate from malaria in the Army is .01 per cent.

"The use of D.D.T. and atabrine is primarily responsible for lowering the incidence rate of the most disabling tropical diseases. The remarkable record in lowering the malaria rate is due also to strict discipline and control measures. Malaria is spread by the anopheles mosquito and the larva. Areas are sprayed with D.D.T. by plane and a five per cent solution of D.D.T. sprayed on barracks walls in kitchens and huts kill all mosquitos and flies alighting thereon for months after spraying.

"The dysenteries, so common in the Pacific areas, which are spread by flies are also rendered less prevalent by the use of D.D.T.

"Atabrine has been found more effective as a therapeutic agent in the control of malaria than quinine.

"Filariasis, which is also spread by the mosquito, is reduced by the use of D.D.T. and mosquito control methods.

"Schistosomiasis is caused by small fluke found in pools and running streams which in a matter of seconds burrow through the skin and infect the individual. All water found to contain these flukes is posted and personnel is warned not bathe, wade or wash in it.

"Areas found to contain scrub typhus are immediately burned over, clothing is impregnated, and efforts are made to develop a vaccine to counteract it.

"Dengue fever, also spread by the mosquito, is controlled by use of D.D.T. and mosquito abatement.

"It can readily be noted that D.D.T. is one of the miracle developments of this war.

"Last year a tropical disease center was opened by the Army Medical Department at Moore General Hospital, Swannanoa, North Carolina. It was designated as a center for the study and treatment of tropical disease. This center has assisted greatly in the investigation and treatment of these diseases and has reduced the loss of manpower as a result of illness, thereby making an important contribution to the continuing improvement of American medicine.

"In addition to protecting the soldier from diseases of the tropics the Army Medical Department is affording all possible protection against disease and harmful pest which might be brought into the United States by military traffic. This is done through a quarantine branch which works in conjunction with the U. S. Public Health Service and the Navy.

"The Army program includes measures to prevent the importation of dangerous insects from abroad. Extensive insect control programs have been carried out about military stations and airports abroad, using highly effective techniques and agents. Passenger, planes, ships and cargo are sprayed with insecticides in order to eliminate insect risk.

"The battle is also waged through the control of rats and vermine. The most effective means of ridding ships of rats has been to build ships in such a way that rats cannot live or breed aboard them. Modern American ships are practically free of this age-old problem.

"To protect the country against agricultural disease and pest which might be imported, rigid restrictions and inspections are made fully effective for military traffic. Particular stress

is laid upon packing material which might harbor insect forms.

"The Army Medical Department has complete medical and sanitary surveys of all the territory in the Pacific which is potential battle ground. The health hazard to soldiers are known to the Medical Corps officers who accompany all invasion troops and that knowledge is distributed to all the men.

"The Army Medical Department has been doing a fine job in the Pacific and will continue to do that job as activities in that theater increases. It is true that the pestilential islands of the Pacific have not been changed into gardens of Eden, but when the deplorable health conditions that existed there are compared with what has been accomplished it is obvious that our victory over the Japs will be hastened.

"While all of this work and planning was going on the increased activity in the Pacific the Army Medical Department during 1944 took care of 4,435,000 patients in hospitals—2,315,000 in the United States and 2,120,000 in hospitals overseas. In addition it provided care for an additional 43,210,000 non-hospitalized patients those with minor infections and injuries who were only temporarily incapacitated.

"It performed the essential functions of caring for men wounded in battle, the injured and the sick to maintain fighting strength with 45,000 medical corps, 15,000 dentists, 52,000 nurses, 2,000 veterinarians, 18,70 medical administrative corps men, 2,500 sanitary corps specialist, 1,000 physical therapists, 1,500 dietitians, 61 pharmacy corps officers, 535,000 enlisted medical aid men and approximately 80,000 civilian employees.

"Illness and recuperation of wounded and injured men does not cease with a formal declaration of the end of hostilities on any front. The care of these men and women is a continuing responsibility of the Medical Department which will go on for many months in the future. It will increase rather than diminish during the remainder of 1945, according to the best estimates which can be made now. Therefore, as I have said before, medical care by the Army has yet to hit its full stride. One thing I wish to promise is that the best scientific medical attention will continue to be furnished to every man needing it."

Selected

## CONSTRUCTIVE PROGRAM FOR MEDICAL CARE

### AMERICAN MEDICAL ASSOCIATION

This platform was adopted by the Council on Medical Service and Public Relations and the Board of Trustees of the American Medical Association on June 22, 1945.

#### Preamble

The physicians of the United States are interested in extending to all people in all communities the best possible medical care. The Constitution of the United States, the Bill of Rights and the "American Way of Life" are diametrically opposed to regimentation or any form of totalitarianism. According to available evidence in surveys, most of the American people are not interested in testing in the United States experiments in medical care which have already failed in regimented countries.

The physicians of the United States, through the American Medical Association, have stressed repeatedly the necessity for extending to all corners of this great country the availability of aids for diagnosis and treatment, so that dependency will be minimized and independence will be stimulated. American private enterprise has won and is winning the greatest war in the world's history. Private enterprise and initiative manifested through research may conquer cancer, arthritis and other as yet unconquered scourges of humankind. Science, as history well demonstrates, pros pers best when free and unshackled.

#### Program

The physicians represented by the American Medical Association propose the following constructive program for the extension of improved health and medical care to all the people:

1. Sustained production leading to better living conditions with improved housing, nutrition and sanitation which are fundamental to good health; we support progressive action toward achieving these objectives;
2. An extended program of disease prevention with the development or extension of organizations for public health service so that every part of our country will have such service, as rapidly as adequate personnel can be trained.
3. Increased hospitalization insurance on a voluntary basis.
4. The development in or extension to all localities of voluntary sickness insurance plans and provision for the extension of these plans to the needy under the principles already established by the American Medical Association.
5. The provision of hospitalization and medical care to the indigent by local authorities under voluntary hospital and sickness insurance plans.
6. A survey of each state by qualified individuals and agencies to establish the need for additional medical care.
7. Federal aid to states where definite need is demonstrated, to be administered by the proper local agencies of the states involved with the help and advice of the medical profession.
8. Extension of information on these plans to all the people with recognition that such voluntary programs need not involve increased taxation.
9. A continuous survey of all voluntary plans for hospitalization and illness to determine their adequacy in meeting needs and maintaining continuous improvement in quality of medical service.
10. Discharge of physicians from the armed services as rapidly as is consistent with the war effort in order to facilitate redistribution and relocation of physicians in areas needing physicians.
11. Increased availability of medical education to young men and women to provide a greater number of physicians for rural areas.
12. Postponement of consideration of revolutionary changes while 60,000 medical men are in the service voluntarily and while 12,000,000 men and women are in uniform to preserve the American democratic system of government.
13. Adoption of federal legislation to provide for adjustments in draft regulation which will permit students to prepare for and continue the study of medicine.
14. Study of postwar medical personnel requirements with special reference to the needs of the veterans' hospitals, the regular army, navy and United States Public Health Service.

## Hurtful Pharisaism

It has become quite an American fashion to seek new political remedial agents which when adopted usually fail to remedy. The War Food Administration is one of these but at best a wartime measure, we hope. And there is the OPA, another war effort, which had a mighty fine opportunity to serve the country until it developed the policing urge rather than distributive efficiency. And there are other of these war agencies that have been guilty of disservice to the citizenry because of plain dumb executives with a yen for regulations of all sorts.

But a more dangerous type of proposed legislation is that commonly known as socialized medicine and discussed ardently by agile planners who favor communal living and hate the profit motive for what reason they do not know. Most of them live well on the tid-bits of the very unfortunate masses whom they self-appointedly represent. They are paid to foment distrust rather than to cure the sick. They are sure that our physicians are gentlemen equipped with heated tongs who torture the poor for pay—very high pay.

They do not like the term "socialized medicine," so they call it insurance. They assume that once the direction of "healing the sick" is a governmental responsibility that disease and ill-health will disappear like dew before the sun. What they would really say if they were quite frank in their advocacy of this latest communal effort is that it would provide job upon job for social workers; ease upon ease for indifferent and illtrained nurses; hospital management under the direction of inexperienced business managers and a host of unambitious physicians and surgeons seeking a "life pension" as the top unit of this communal enterprise.

We have had the opportunity to observe fine physicians in action where the poor are concerned. They have given their time and experience and fine knowledge to the cure of the unfortunates brought to them. Their price scale to these people more nearly approach "zero" than any other figure. Of course, it is foolishly stated that this charity is charged against the bills of their more fortunate customers. And that, too, is a libel.

We often wonder why people like Wade Church and hundreds of his type do not take up the healing of the poor and the relief of the distressed as a private profession rather than a public duty with the tax-paying public assuming the responsibility for their easy living while they contentiously pull down splendid institutions which they would replace with "wheezy" imitations.

They are the lads that crowd the temple steps and shout their goodness to the multitudes. For acclaim merely! Not at all. They are professional operators for pay; exhibitionists of a sort who always allure weak and equally hypocritical

politicians to their side and for whose adulation they are presumed to PAY in votes. In short, they are the modern pharisees. They will orate on human misery at every opportunity, or without it, and glibly recite percentage figures that will make one shudder. But they never produce living proof of their assertions.

With all their faults, and we presume they have some, the medical practitioners, if called upon to do so, could produce literally thousands of unfortunates who were sick and have been restored to health; who have been maimed and were healed. And for what fee? Little or nothing.

In practically every county in this country excellent hospitals have been erected for the treatment of the unfortunate poor. And who are the persons who attend them? The Wade Churches, the politicians who breed his kind? Not at all, rather men of high professional attainment and without pay. Who never refer to these institutions as "my hospital or our hospital," on their own time and at their own expense without any display or fuss and feathers.

Most of us worry over our aches and pains. Few of us contribute much to our physical welfare. We fear to die but fail to help ourselves to live. We will shoot hundreds of dollars for pleasure but rarely a buck for physical check-up. We will do everything humanly possible to make a physician's life miserable when we are sick, and when through patient care he has returned us to health, we will invite tonguesters like Church to come in and tell us we ought to kick these skillful men into the discard and set up a politically controlled fraternity to take their place.

*Tucson Daily Citizen*  
June 28, 1945

## CONTROL OF MALARIA

This release has been cleared for publication by the Press Censor, India Burma Theater

**NEW DELHI, INDIA:** While American armies have been winning decisive victories in the Far East, little known medical units in India and Burma have been winning a prolonged, exacting struggle against one of mankind's most dreaded diseases—malaria.

One of the world's worst malaria areas stretched across India and Burma, where Americans in 1942 were assigned to work and fight after the Japanese conquest of Burma and the enemy's initial threat to the security of India itself.

Exact figures cannot be given because of military security, but rigid malaria control in the India Burma theater has cut malarial incidence among American troops to a fraction of the casualties from the disease during the early appearance of American troops in Upper Assam

and northern Burma areas where the native population was infected almost 100 per cent.

Stringent control measures have reduced the malaria rate to less than one-eighth of the original figures predicted by British officials.

When work began on the Stilwell Road, troops in the Ledo area were infected in large numbers, and those who hadn't yet experienced the alternating chills and fever of malaria were, according to one Army official, expecting to be stricken with the disease.

By early 1945, as troops once again awaited the approach of the drenching monsoon rains and the resultant climb in malaria incidence, malarialogists of the theater surgeon's office and the troops themselves were certain that their malaria rate would not climb on the charts which showed a sharp, steady drop over the months during which Americans have been stationed in this part of the world.

Troops in India and Burma were charged with supplying China. To do this, a land route was needed to augment air supply after the old Burma road was closed. The area over which the land route necessarily had to run because of enemy occupation, extended through the worst malaria area in the world.

When troops first arrived in India, they were told flatly their job just couldn't be accomplished. And the main reasons were Jap opposition or terrain or weather. All of these were contributory, but the greatest deterrent of all to the accomplishment of the American mission was malaria.

These predictions of failure were alarmist and defeatist, but they were based on vital statistics which showed that more than 100,000,000 persons are afflicted with malaria every year in India. More than 1,000,000 of these die from the disease every year.

At that time early 1942 Indian and British troops fighting in the 100 per cent infected areas of Assam and Burma had suffered many times more casualties from malaria than from enemy action. Often malaria alone decided the issue, and quite often the decision was in favor of the Japanese.

Americans were inclined to heed the pessimistic statements. They did not belittle the predictions of their allies nor did they place unlimited faith in their ability to conquer the disease. They were sobered by the knowledge that at that time malaria had not been conquered in the South-

west Pacific. Malaria for a time held the balance of power in that area, and it consistently claimed four to six times the casualties in battle.

For 20 years an American doctor, Earl M. Rice, had operated his own hospital in Assam. He knew the country intimately, he had made a lifetime study of malaria, he had been closely associated with both British and Indians and he spoke the native language fluently.

Tropical medicine was Rice's specialty. He was a member of the American Society of Tropical Medicine and a fellow of the Royal Tropical Medicine. He was born in 1891 in Hartford, Conn., earned his M. D. degree at the University of Oregon in 1915, and claimed South Carolina as his legal residence.

With a specialist's knowledge of malaria and with his long residence in the heart of the area where malaria had to be whipped, he was the ideal man to handle the job.

Rice was commissioned a lieutenant colonel in the Army medical corps and assigned the task of controlling the scourge which, if left unchecked, would most surely neutralize the American effort in India and Burma.

Meantime, as a result of medical experience on Guadalcanal, two types of organizations were being formed and trained in the United States to combat malaria, control units and survey units.

Control units consisted of sanitary corps officers with engineering background and all enlisted men. Their job was actual physical control, drainage to eliminate breeding spots, oil and Paris Green (an arsenic compound) spraying to kill larvae, mosquito-proofing quarters to prevent bites by the infected insect, and spraying to kill the adult mosquito.

Survey units laid the groundwork for control. They evaluated areas as to their relative importance as breeding centers, decided which to treat first, and examined blood and spleens of native children to determine incidence. Their personnel consisted of two officers, an entomologist and a parasitologist, and 11 enlisted men.

Equipped with complete portable laboratories, these highly trained specialists worked ahead of and with the control units. When they found enlarged spleens in children up to 12 years of age, they knew they were dealing with a population actively infected with malaria. (Children provide a more accurate criterion of the degree of active infection because of the immunity fac-

tors in adults which make a spleen reading unreliable.) Then they took blood smears to determine the parasites.

Malariaologists say that a 25 per cent spleen rate is bad, but in Assam and Burma the rate consistently exceeds 90 per cent and often rose to 100 per cent.

Shortly after Col. Rice took over his tremendous job, two of each of these units were obtained from the United States and put to work. During the ensuing period, the number of survey and control units increased greatly.

Normal delays were encountered during this early period because of the inability to get equipment and supplies rapidly from the states. Had not the War Department given malaria control supplies a shipment priority equal to that of food and ammunition, the fight would have been prolonged at the expense of soldiers' health and lives.

Sections of India and Burma each presented problems peculiar to the area. The *anopheles philippinensis* was worst in Bengal. This species multiplied rapidly in innumerable ponds and tanks which were virtually impossible to drain.

Assan, dotted with tea plantations and rice paddies, was found to be a hyperendemic area, with 50 per cent or more of the population stricken. Seepage areas were worst during the monsoons. And the *anopheles minimus*, probably the most violent mosquito carrier known, was the prevalent type of species.

In the Patwai hills, foothills of the Himalaya mountains, along the Assan-Burma border, where the Stilwell Road now treads its way toward China, thick vegetation along mountain streams offered ideal breeding places for the *anopheles minimus*.

As the Road pushed its way over the mountains and dropped into the Hukawng valley, the survey found in the dense virgin tropical forest not only the *minimus* but its dread runner-up, the *anopheles leucosphyrus*. One of the reasons that the Hukawng valley has remained uninhabited is because of the prevalence of these two species. Yet along this route the Americans forged an all-weather road and fought their battles against the Japs.

New problems were encountered in the rice paddies around Myitkyina and the swamps, large depressions, and innumerable shell holes, perfect breeding places, around Bahmo.

Drainage and Paris Green and oil sprays to

prevent breeding were not enough. Sprays to kill the mosquito itself and screening and netting were necessary as a barrier between the mosquito and the soldier's skin.

Aerosol bombs, ingenious metal cylinders containing pyrethrum and freon-12, were used. Emitting their mist in the mosquitos' direction, they meant instant death for the mosquito. Their compactness offered convenience and effectiveness for field units which could not be burdened with massive equipment. The contents of one aerosol bomb equal a gallon of liquid spray.

Millions of yards of hessian cloth, a type of burlap made from Indian jute, was used to combat the mosquito menace. With the help of native labor, it was used to line loosely woven bamboo bashas, tents, and bombed buildings used temporarily as Army billets. Everything was mosquito-proofed. Whenever fast-moving troops stopped for a breather, the work began.

Troops engaged in combat and in the building of the Stilwell Road could derive only limited benefit from these more or less stationery measures. Each man was ordered to take certain recognized precautions himself. Wrist and ankles were covered at night, and liquid repellent (dimethyl-phthalate) was spread on hands and face at nights.

Even in the forward areas, troops saw regular movies. Areas were enclosed and attendants were instructed at the gate to apply their repellent before gaining admittance. One application was effective until the men could get under their nets for sleeping.

The Army manuals say that camp sites should be chosen some distance from the native population. But labor was needed, transportation was limited or non-existent, and time was valuable; so the soldiers had to live in close proximity to the small native centers of population. Native huts and entire villages were sprayed with liquid insecticides.

Late in 1944, the India Burma theater began to receive quantities of the new wonder chemical, DDT (dichloro-diphenyl-trichlorethane). It was a substance which would retain its killing power for several months once applied to a surface. It was possible now to use it in the native villages and habitations which had always constituted a major menace as reservoirs of infection. To cover large areas, DDT was sometimes sprayed from planes.

These measures had the mosquito on the run, for permanently situated individuals. But the one big weak link in all control measures is the person who moves in and out of an area, who doesn't stay put, who is cautious part of the time and careless the rest.

Atabrine, one of the wonder drugs of the war, provided the near-solution to this problem. Malariaologists in India and Burma declare its value far exceeds that of quinine in fighting malaria. Even if unlimited supplies of quinine were available, it is doubtful that the drug would be used in any quantity.

Atabrine doesn't prevent a person from contracting the benign type of malaria, but will suppress it so that he doesn't suffer from its effects. It usually does prevent malignant malaria.

Great strides have been made since Col. Rice began the pioneering job of stamping out malaria in the worst area in the world. It hasn't been stamped out completely, nor will it be until control measures are universally adopted. But the rate for American troops has dropped below all previous hopes, and there's every reason to believe it will continue to decrease.

Col. Rice has moved out of Assam to Ceylon, where for the past 17 months he has served as medical adviser to Lord Louis Mountbatten, supreme commander of the Southeast Asia Command.

The malaria fight at present in India Burma is being carried on under the direction of Colonel Karl R. Lundeberg, chief of the preventive medicine section in the theater surgeon's office. A native of Kenyon, Minn., Col. Lundeberg was recently awarded the Legion of Merit for his work in preventive medicine in the Surgeon General's office.

Direct staff supervision of the control fight is handled by Major Maurice Seltzer, of Philadelphia, Pa. Malariaologists in each of three districts in the India Burma theater coordinate the activities of malaria units, both survey and control.

These highly trained technicians have worked with the troops and ahead of the troops, in combat, on the Stilwell Road, through the jungles, in and around all types of installations. Theirs has been a major contribution to ultimate total victory. Without them, the Stilwell Road might never have been built and the battle for northern Burma might never have been won.

#### THE EYE-BANK FOR SIGHT RESTORATION INC.

The Eye-Bank has been established in order to make available to hospitals and surgeons who are qualified to perform the corneal graft operation a supply of fresh or preserved corneal tissue, wherever and whenever needed. In brief, the objectives are:

To encourage and extend, by teaching and research, the knowledge and skill required to perform the operation. Money is needed to extend the horizon of this work. Fellowship will be established when sufficient funds have been raised. Qualified eye institutions throughout the country may apply for these fellowships.

To establish sources of supply of salvaged eyes and corneal tissues; to establish an eye-bank for the collection, preparation, storage and redistribution of salvaged eyes and corneal tissues.

Any eye which is sent to the Eye-Bank will have a complete pathological study made and a report sent to the institution which supplied the eye, on request; also bacteriological studies will be made for possible contamination, etc. Institutions desirous of making their own pathological examination will have the eye returned to them in the proper preservative fluid. There are naturally many smaller institutions that do not have the facilities for the proper pathological examination of eyes, and one purpose of the Eye-Bank is to encourage complete pathological studies of all eye tissues sent to it.

Initially, the needed space and personnel has been made available in the Manhattan Eye, Ear and Throat Hospital. The Eye-Bank will acquire additional space, personnel and equipment as needed, so as to serve not only the New York area but localities throughout the country.

A subsidiary function of the Eye-Bank is to stimulate an interest in research work on blindness resulting from corneal damage for which fellowship and scholarships are to be established and distributed to qualified institutions throughout the country where this work can be performed.

Selected

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#### GENERAL SIMMONS TALKS ON TROPICAL DISEASES

Brigadier General James S. Simmons, USA, The Chief of the Preventive Medicine Service, Office of The Surgeon General, who recently

returned from an inspection trip of preventive medicine activities in the Pacific theater of war, spoke on "Progress in the Army's Fight Against Tropical Disease" at the 50th anniversary meeting of the Alpha Kappa Kappa Medical Fraternity of the University of Michigan, Ann Arbor, Mich. Highlights of his report follow:

**Malaria:** At one time in the Southwest Pacific, casualties from malaria were high and more than 30 per cent of the hospital beds were occupied by malaria patients. Now, due to widespread suppressive use of atabrine and to the establishment of good mosquito control in all base areas, admission rates from malaria have decreased markedly.

**Dengue:** A peak rate of 138 per 1000 per annum occurred in Pacific Ocean Areas in September, 1944. An outbreak on Saipan subsided abruptly following the spraying of D.D.T. by airplanes. Since then rates in that theater have been below 30 per 1000 per annum.

**Diarrhea and the Dysenteries:** Rates reflect sanitary conditions, including food and water sanitation and fly control. The new insecticide D.D.T. is greatly simplifying the control of flies in latrines, mess halls and kitchens. On the whole, the situation in Pacific Ocean Areas has been satisfactory.

**Scrub Typhus:** We now have effective methods for the control of this disease by attacking the mites which transmit it.

**Infectious Hepatitis:** Great progress has been made in the study of the epidemiology of this disease by Commission members of the Army Epidemiological Board, and the work is continuing.

**Filariasis:** Its incidence at present is not alarming. Mosquito control prevents this disease.

**Schistosomiasis:** On Leyte all dangerous streams have been posted with signs warning the troops against the dangerous Japanese blood flukes. Educational teams are being developed to travel from unit to unit to acquaint the troops with the dangers of bathing or wading in infested fresh water.

In conclusion General Simmons said that he was proud of the way the Medical Department has carried out the Army's program of preventive medicine, and of the remarkable results obtained.

Selected

## PRESENT DAY TREATMENT OF ESSENTIAL HYPERTENSION

DAVID AYMAN

Department of Medicine, Tufts Medical School, Boston, Mass.  
M. Clin. North America, 28: 1141-53, Sept. 1944

Treatment of essential hypertension is of two types, treatment of the disease itself and treatment of the symptoms. Three groups of symptoms are discussed with their therapy. The less common causes of high blood pressure are described. With these out and with no organic disorder found to cause the condition, the disease is termed "essential" or "primary" hypertension. An enlarged heart, thickened arteries, abnormal ocular fundi, some albuminuria, and red cells in the urine have been found to be the result, no cause, or hypertension.

A diagnosis of hypertension is made wherever the blood pressure is frequently over 140 mm. or mercury systolic or 90 diastolic, and especially if there is not a rapid pulse. If such a patient has a parent with hypertension, cerebellar hemorrhage, or one who died suddenly, such a slight elevation in blood pressure is considered sure evidence or an essential hypertension.

The hypertensive patient is described as having excessive emotional reactions or physical drive, a serious planning nature, a quick temper or a supersensitive disposition. Many patients have no early symptoms, and the condition is revealed by routine physical examination.

Blood pressure levels vary greatly and may be elevated by emotions, and a patient may appear upon examination to have marked hypertension but show only slight or no elevation when at home. Usually the blood pressure is found to drop progressively from the first visit to the fifth or sixth visit.

The three groups of symptoms in essential hypertension are; (1) psychosomatic symptoms, (2) vasospastic symptoms and (3) organic symptoms. The first has headaches, dizziness, weakness, insomnia, constipation or diarrhea, urinary frequency and bitter tastes. The second may have no headaches or other symptoms for years, although having a blood pressure of 250 to 300 mm. systolic. In others of this group there are great blood pressure elevations with headaches, convulsions, and temporary pareses due probably to vascular spasm. The third group has symptoms of shortness of breath caused by cardiac enlargement and failure, nocturia resulting from renal damage, angina pectoris from arteriosclerotic coronary arteries, cardiac asthma and cerebral hemorrhage.

The psychoneurotic symptoms are treated by psychotherapy and use of sedatives. Patients suffering from continuous insomnia are given phenobarbital (0.1 to 0.2 gm. or 1½ to 3 gr.) or chloral hydrate (0.6 to 1.3 gm. or 10 to 20 grains) or amytal (0.1 to 0.2 gm. or 1½ to 3 grains) each night until sleep has restored strength and energy. Emotional concern over symptoms may be relieved by use of placebos administered with enthusiasm.

There are only two methods of lowering the hypertension itself, either by use of potassium thiocyanate or by sympathectomy. In using potassium thiocyanate arrangements must be made for the necessary chemical determinations of blood levels. Counterindications for the use of this drug are renal function impairment, congestive heart failure, easily provoked attacks of angina pectoris or marked debility.

The dosage of potassium thiocyanate is 1 to 3 grains (0.065 to 0.2 gm.) of enseal (Lilly). The initial dose is 0.2 gm. three times daily for three days, then 0.2 gm. twice a day for four days. At the end of the first week a 10 cc. sample of blood is taken. Should the blood level be 6 mg. or less, 0.2 may be given two times a day for another week. Again the blood level is ascertained, and if not above 8 gm., the dosage is the same for the third week. If it is above 8 gm. at the end of the second week, the dosage is reduced and omitted one day in the third week. Dosage is continued indefinitely with blood determinations every three of four weeks. Blood should be maintained between 8 and 10 mg., but levels may be 10 to 12 mg. if blood levels can be taken every two weeks.

Fatigue may occur at the levels of 6 to 8 mg., but toxic symptoms do not appear until levels are 10 to 12 mg. The patient should discontinue the drug when weakness or fatigue occurs until the physician is seen. Fatigue with a blood level below 8 mg. is not important.

Decreased dosage is advised when nausea, vomiting, abdominal cramps, diarrhea or dermatitis occurs. Psychosis, delirium and collapse require discontinuance of the drug. The drug is excreted in two to three weeks. If discontinued, after that time symptoms will recur and the blood pressure will rise.

Indications for sympathectomy are discussed.

In these cases surgery is considered of value even if relief from symptoms endures for only three to five years. Mortality is about 3 per cent. The operation is followed by three to four months of disability.

Treatment by diets is of no value and no drugs other than the thiocyanates are effective.

Reprint from "Quarterly Review of Medicine", February 1945.

## DISEASES OF THE CARDIOVASCULAR SYSTEM

Seven Common and Important Problems In The Management  
M. Clin. North America, 28: 1129-40, Sept. 1944.

PAUL D. WHITE

Harvard Medical School and Massachusetts General Hospital  
M. Clin. North America, 28: 1129-40, Sept. 1944

Seven cases of heart disease are described to illustrate important problems incurred in treating patients with cardiovascular symptoms and other signs frequently observed by general practitioners. The first is that of acute rheumatic heart disease in a boy of 10. Bed rest is most important in these cases. Drugs are of slight importance except salicylates given for joint discomfort and effusions. Digitalis is given under close supervision if congestive heart failure develops, occasionally supplemented by diuretic drugs such as theodate. Quinidine is given for fibrillation. Injection with hemolytic

streptococci is the precipitating factor in rheumatic heart disease and protection should be given against contact with infected persons.

The second case discussed is that of subacute bacterial endocarditis in a woman of 20. Whereas the death rate was formerly about 100 per cent in this disease, mortality has been greatly reduced by use of sulfonamides. The treatment used is an initial dose of 2 gr. of sulfapyridine, followed by 2 gm. in two hours, then 1 gm. every four hours until the blood level of free sulfapyridine is about 10 mg. 100 cc. The level is maintained for weeks by properly adjusted dosage.

Massive doses of penicillin have been found effective in control of the infection in one-third of the cases. The drug is administered in doses of 200,000 international units daily intravenously or intramuscularly for two to three weeks. The drug is discontinued if fever disappears and the blood stream is sterilized. Recurrence of the infection is followed by further dosage. Penicillin does not have the toxic reactions of sulfonamides.

The third case is one of neurocirculatory asthma in a soldier of 25. There is no specific treatment, but sympathetic reassurance and appreciation of the limitations of the patient are advised. The fourth case described is a malignant hypertension with cardiac enlargement in a woman of 40. The case received a "Smithwick hypertensive work-up" and was found suitable for Smithwick splanchnic resection. The technique is described.

The fifth case is that of a man of 40 with angina pectoris decubitus. The symptoms and prognosis are discussed. Life expectancy is the same as for angina pectoris, 9 to 10 years. Rest is the only treatment under the tongue to prevent attacks of pain or sodium nitrate or erythrol tetranitrate  $\frac{1}{2}$  to 1 grain 2 to 3 times daily, especially at bedtime. Occasionally enteric coated aminophylline tablets 3 grains or 4 times daily are found helpful. Radical measures are rarely needed.

Insomnia due to left ventricular weakness in a man of 60 is the sixth case. The patient was given diuretic drug and complete rest for two weeks in addition to digitalis. Intravenous mercurial injections (mercupurin 1 to 2 cc.) were given every two, three or four days for several doses. Supplementing this drug, ammonium chloride 1 gr. (two  $7\frac{1}{2}$  grain enteric-coated tablets) 4 times a day is helpful. Fluid intake is reduced to 40 ounces in twenty-four hours.

The last case cited, a 65-year-old patient, suffered with troublesome and crippling attacks of cardiac arrhythmia. Quinidine sulfate given in doses of 6 grains at two to four-hour intervals for 1, 2, or 3 doses brought cessation of attacks, but the attacks finally became more and more frequent until they occurred every day or two. It is recommended that quinidine be omitted in such cases and full digitalization be maintained to keep the ventricular rate under control and prevent attacks. The patient takes a daily dose of 1 to  $1\frac{1}{2}$  grains of the powdered leaf in pill or powder form and lives a perfectly normal life.

Quarterly Review of Medicine, February 1945.

## ORGANIZATION SECTION

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\* Terms expiring in 1945 will hold until 1946.

### *President's Message*

The summer is flitting by and the work of the Association is getting well under way for the winter season. *The Medical Quarter Hour*, the weekly radio programs sponsored by the Association, have continued through the summer with a timely series of broadcast on "Keep Cool". The Committee on Public Health Education report a nice public response to these broadcasts.

Of special interest to the Council has been the study of the Committee on Medical Economics relating to a *Medical Service Plan* for Arizona. A short time back, the membership were sent questionnaires asking three questions: 1. Whether now is the time to inaugurate a *Medical Service Plan* in Arizona, 2. Whether such a plan should include both medical and surgical care at the outset, or 3. Whether such a plan should include major surgery and obstetrics for the initial service. The replies were in the affirmative on question 1, with question 3 affirmative over question 2. It is felt that, taking the problems of administration into consideration, it would be wise to include surgery and obstetrics in the initial plan and add medical service as a reserve is compounded.

Mr L. Donald Lau, Executive Director of the Blue Cross Hospital Service Plan for Arizona, was invited to address the Council and the House as to administrative aspects of a medical service plan. Mr. Lau pointed out just how the Blue Cross along with their hospital commitments, assisted in many states in the administration of a *Medical Service Plan*.

The Association has also been in touch with the Colorado Medical Service Plan and will mail the membership, in the near future, pamphlets covering benefits, fees, and rules and regulations of the Colorado plan as guides for Arizona studies. Each member is urged to read this material when he receives it and to reply

to the letter accompanying the mailing. In addition, the Council is sending Mrs Coleman of the central office to Denver to study the administrative angles of such a medical service so that we may have first hand information as to cost, and all procedures. California will be included in the itinerary as that state also has a medical service plan under the direction of the medical association as you probably know. This information and material will be in hand in early August, after which time the Council will again convene and make final recommendations to the membership.

The membership is therefore urged to be on its toes in this matter and let the Committee on Medical Economics have its full reaction to the proposal of a *Medical Service Plan for Arizona* - operated and controlled by the medical profession.

Fraternally yours



President.

#### SEROLOGY AND THE DIAGNOSIS OF SYPHILIS

(Continued from page 241)

rule out the more common non-syphilitic causes of false positive reaction should be done.

It is important that antisyphilitic treatment be withheld until conditions other than syphilis are ruled out. If treatment is started at once the opportunity for making an accurate diagnosis is often lost. The serology may become negative after a few injections and one is at a loss to know whether this represents response to therapy or merely reflects the facts that the patient never had syphilis at all.

The serologic tests for syphilis are no different than any other laboratory examination. They add to the diagnostic material but are not necessarily in and of themselves absolutely diagnostic. They are an aid and frequently a valuable aid in diagnosis, but they are all, only additional information and should be considered as such. No individual sitting behind a desk can make a diagnosis from a report written on a piece of paper with no knowledge about the patient.

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#### REFERENCES

1. Kahn, R. L.: Serology in syphilis control. Baltimore, Md.: The Williams and Wilkins Company, 1942, p. 10.

2. Stokes, J. H.: Modern clinical syphilology, ed. 2. Philadelphia, W. B. Saunders Company, 1943, p. 131.

3. Rein, Charles R. and Elsberg, E. S.: Studies on the incidence and nature of false positive serologic reactions for syphilis. Am. J. Clin. Path., Vol. 14: p. 461. Sept. 1944.

## Staff Meetings

#### ST. MONICA'S HOSPITAL, PHOENIX

May 17, 1945

Presentation of Case with interesting diagnostic problems—Dr. J. W. Pennington.

#### GOOD SAMARITAN HOSPITAL, PHOENIX

May, 1945

Report of a Case of Coma—Dr. L. D. Beck.

June 25, 1945

Scorpion Sting—Dr. E. H. Running.

#### ST. JOSEPH'S HOSPITAL, PHOENIX

May 14, 1945

Case of Fatal Inversion of the Uterus—Dr. A. Cheiker.

Case of Post-Partum Death, Cause Under-determined—Dr. C. J. Barker Sr.

June 11, 1945

Multiple Aspiration Treatment of Empyema, with Penicillin, with report of a case—Dr. E. H. Running.

Case of Alkalosis—Dr. R. H. Stevens.

#### ST. MARY'S HOSPITAL, TUCSON

May 16, 1945

Splenectomy, discussion of a case with post operative care—Dr. D. Daughtry.

Screw-worm Infection of Paranasal sinuses—Dr. E. Brown.

The officers for the coming year 1945-46 to begin duties in fall:

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#### MARICOPA COUNTY MEDICAL SOCIETY

May 7, 1945

Arizona Vocational Rehabilitation Program—Mr. Harry V. Bene, State Supervisor.

Serology and Diagnosis in Syphilis—Dr. Thomas T. Frost.

June 4, 1945

Treatment of Hip Fractures—Dr. James Lytton-Smith.

**MEDICO - LEGAL SECTION**  
**IN THE SUPREME COURT OF THE**  
**STATE OF ARIZONA**

LA PRADE, J.:

On and previous to July 24, 1943, petitioner was employed by respondent employers as a structural iron worker in the construction of the aluminum plant west of the City of Phoenix, Arizona. On July 24th, petitioner was overcome with heat, later diagnosed by his attending physician as "heat stroke", and became temporarily unemployable. In due time, petitioner filed his claim, liability was admitted by the employer, and payments of compensation for temporary total disability were commenced, pursuant to the Commission's order dated September 3, 1943. The final report of I. L. Garrison, the doctor in attendance, gave October 1, 1943 as the date upon which petitioner was able to work.

Petitioner worked intermittently at his regular trade from August 9, 1943 until December 8, 1943, when he was referred to a board of medical consultants composed of Drs. I. L. Garrison, A. M. Tuthill, and H. J. McKeown. They recommended that certain laboratory work be done. Petitioner thereupon was admitted to the hospital, and this phase of the medical investigation was carried out by Dr. Maurice Rosenthal.

On March 14, 1944, the Commission rendered its findings and award for temporary total disability from July 26, 1943 to and including October 3, 1943. Petitioner, being dissatisfied with the award, filed his Petition and Application for a Rehearing. The basis of his complaint, as stated in his petition, was

"That he still suffers from the injury received by him; that he is unable to carry on his employment of the type and nature held by him because of physical disability caused by accident, subject of this petition for rehearing; that medical examination at this time will show that he suffers from permanent injuries, and disabilities."

The petition for rehearing was granted and the hearings held on April 27, 1944, after which, on June 28, 1944, the Commission, in effect, affirmed its award of March 14, 1944. These findings and award on rehearing were concurred in by two commissioners only. The third commissioner refused to concur. One of its findings on the rehearing was:

"That the disability from which this applicant claims to have suffered or claims to be suffering after October 3, 1943, is not proximately the result of any personal injury sustained by accident arising out of and in the course of his said employment by the above-named defendant employer."

Petitioner has brought this decision here for review.

Petitioner in his Petition for Writ of Certiorari, among other things, alleges:

- (1) That the said findings and award on rehearing are not supported by the evidence, and are contrary to the evidence.
- (2) That the evidence shows that the petitioner is still suffering from the accident and injury sustained by him, and will continue to so suffer, and that such accident and injury may become fatal, and may and usually does result in death, epilepsy, or insanity.
- (3) That said findings and award of the Commission are not supported by the evidence, and are arbitrary, in excess, and beyond its power; that the said findings do not support such award.

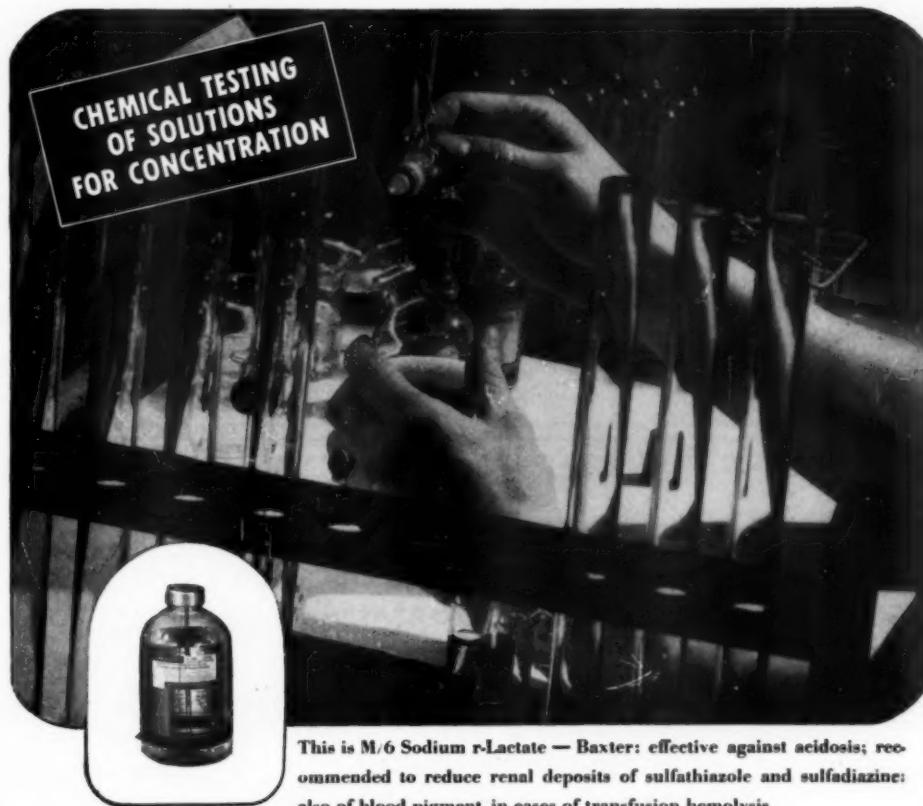
The sole question presented for review is whether or not there is substantial and competent evidence supporting the findings and award of the Commission that the applicant suffered no permanent disability as a result of the accident of July 24, 1943.

This court in *Federal Mut. L. Ins. Co. v. Ind. Com.* (1926), 31 Ariz. 224, 252 Pac. 512, announced the rule, which it has uniformly followed, and from which it has never departed, that when the Industrial Commission acts within its jurisdiction, and acts judicially, and there is any reasonable evidence—whether in conflict or not,—and whether the evidence is such that reasonable men may differ as to its probative force, that the findings of the Commission are conclusive and binding on the Supreme Court. *Blankenship v. Ind. Com.* (1928), 34 Ariz. 2, 267 Pac. 203; *Johnson v. Ind. Com.* (1929), 35 Ariz. 19, 274 Pac. 161; *Moeur v. Farm Builders Corporation* (1929), 35 Ariz. 130, 274 Pac. 1043; *Young v. Hodgman and MacVicar* (1933), 42 Ariz. 370, 26 Pac. (2d) 355; *King v. Orr* (1942), 59 Ariz. 234, 125 Pac. (2d) 699.

Admittedly, head stroke or sun stroke is regarded by both the medical authorities and the courts as a serious and frequently disastrous condition, often resulting in death and disability, and when proven is held to be compensable.

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L. W. Daily Construct. Co. vs. Carpenter (1944), 53 N. E. (2d) 190 (Ind. App.); Fidelity and Casualty Co. vs. Adams (1943), 28 S. E. (2d) 79 (Georgia App.); Malone vs. Ind. Com. (1942), 43 N. E. (2d) 266 (Ohio); Douglas vs. Riggs Disler Co. 1939, 5 All. (2d) 873 (New Jersey); Oklahoma Gas and Electric Co. vs. Maloney (1939), 88 Pac. (2d) 363 (Okla.).

In view of the allegations of the petition for the writ challenging the sufficiency of the evidence to substantiate the conclusion of the Commission, we are compelled to examine all the evidence, not as triers of the facts, but for the purpose of determining whether there was before the triers substantial evidence supporting its findings and conclusions. (Cases supra.)

The following is a rather comprehensive digest of the evidence presented to the Commission and the consultant board of doctors:

On the day of the accident, at about the hour of 11 a.m. (M.W.T.), petitioner was employed as an iron worker, working up against a wall where there was no shade, engaged in burning steel with a torch. The official temperature for that date was 112° F. The petitioner felt dizzy and suffered from a headache. He associated

his condition with his work. He stated that he did not know what was the matter with him; that he wanted to get home; and, that he was sick. He asked to be dismissed from his work, but upon the request of his foreman remained until 3 p. m. At the end of the shift he claims that he staggered from his place of work to the gate where he was met by his wife who took him to his home where he had to be assisted into the house. After he arrived home, he took some home remedies and bathed himself with cold water for the two following days.

On July 26th, petitioner visited the office of Dr. Garrison, who testified that when petitioner arrived at his office he had a blood pressure of 115/90, with pulse pressure of 25, which he deemed to be abnormal; that his face was blood-red, and that he was practically in collapse, and complained of a pain in the back of his head and sickness of the stomach. Dr. Garrison made a diagnosis of heat stroke. He testified that the effects may or may not affect the central nervous system, and, if so, it might take years to determine such fact. It further appears that petitioner worked at his usual trade and drew wages at the union scale for 19½ days between

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October 4, 1943 and January 24, 1944. Petitioner was employed at his trade at the time of the rehearing. Petitioner testified, among other things, that he had repeatedly suffered spells of dizziness since the accident; that on one of the jobs upon which he had been employed since the accident, which required his working above the ground, he had suffered from the "shakes", became dizzy and sick, and was afraid that he would fall; that he thereafter got a job upon the ground; that he became so nervous that he could not hold the arc in the process of welding; that he later secured a job as a "lay-out" foreman; and, that he was not able to perform satisfactorily the duties required due to nervousness and an inability to coordinate his movements with his thoughts. Petitioner testified that he was quite concerned over his mental condition; that he became faint at times, had to stop and steady himself; that he could not again hold a job as an iron worker in competition with fellow workers; and, that he wanted medical relief so that he might confidently expect to produce the results that were expected of him as an iron worker.

Petitioner's wife substantiated his claims as

to his outward physical condition on the day of the accident and several days thereafter, and his apparent spells of dizziness and instability of his legs. Ralph C. Shobe, business agent of the Iron Workers Union, testified that he was personally acquainted with the petitioner, and had worked with him as an iron worker prior to the accident in question; that petitioner was a skilled craftsman; that it had been reported to him, subsequent to the accident, that the petitioner got the "shakes" on the job; and, that from these reports he had determined that it was unsafe to send the petitioner out on jobs which would call for work at elevations above the ground.

The report of the board of consultants filed January 14, 1944 reads as follows:

"We find at this time there is no evidence, objective or subjective, of any industrial pathology that is compensable."

During the progress of the rehearing, the portion of this finding to the effect that there were no subjective complaints was called to the attention of the doctors. They at that time admitted that in taking the history of the case during their consultation they had considered

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the subjective complaints of the petitioner and were aware of their climaxed existence. They further admitted that the word "subjective" should not have been included in the finding. At the time of the rehearing April 27, 1944, Dr. Tuthill testified that it was his opinion that the petitioner did not suffer a heat stroke or heat exhaustion July 24th; that if the petitioner did have a heat stroke, it was very likely he would have more trouble; that at the time of his examination of petitioner in December he could find nothing wrong with petitioner and knew of no reason why petitioner wasn't then able to return to work.

The testimony of Dr. H. J. McKeown corroborated the testimony of Dr. Tuthill. He attributed petitioner's complaints to a neurosis.

Dr. Rosenthal testified that he could find no "objective findings or abnormalities that he could connect with heat stroke or heat shock."

Dr. Louis J. Saxe, a practicing physician and surgeon specializing in the field of neurology and psychiatry, testified that as a result of his examination made on April 17, 1944, he could find no "objective condition" to account for the "subjective complaints"; that the symp-

toms were not organic in nature and were purely mental. He stated that if the man had had a heat stroke it may cause mental deterioration, but in his opinion he did not experience a "heat stroke."

Dr. Garrison, who was the petitioner's attending physician, diagnosed the petitioner's trouble as heat stroke and stated that in his opinion petitioner was disabled by reason thereof; that the full extent of disability might not be determined for several years; that when he saw the man July 26, 1943, he was in a state of collapse; that if petitioner again gets overheated, he may go into a collapse and die; and, that in his opinion the man has permanent partial disability resulting from the accident. It is to be noted that Dr. Garrison at the time of the rehearing had changed his opinion with reference to the condition of petitioner from the opinion that he had entertained at the time in January when he signed the report as one of the three consultants to the effect that on January 14th he found no evidence of objective pathology attributable to the accident.

The burden of proof was upon the petitioner to establish to the satisfaction of the triers of

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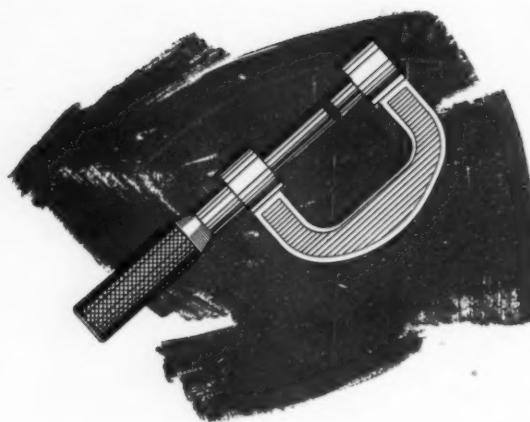
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fact by a reasonable preponderance of the evidence that the so-called heat stroke left a residual permanent disability. Johnson vs. Ind. Com. (1929), 35 Ariz. 19, 274 Pac. 161; Davis vs. Ind. Com. (1935), 46 Ariz. 169, 49 Pac. (2d) 384. In determining whether this burden has been met, the Commission, as triers of fact, is subject to the same rules of law as to the credibility of witnesses and the weight to be given to their testimony as a court or jury in a civil action. Davis vs. Ind. Com., *supra*.

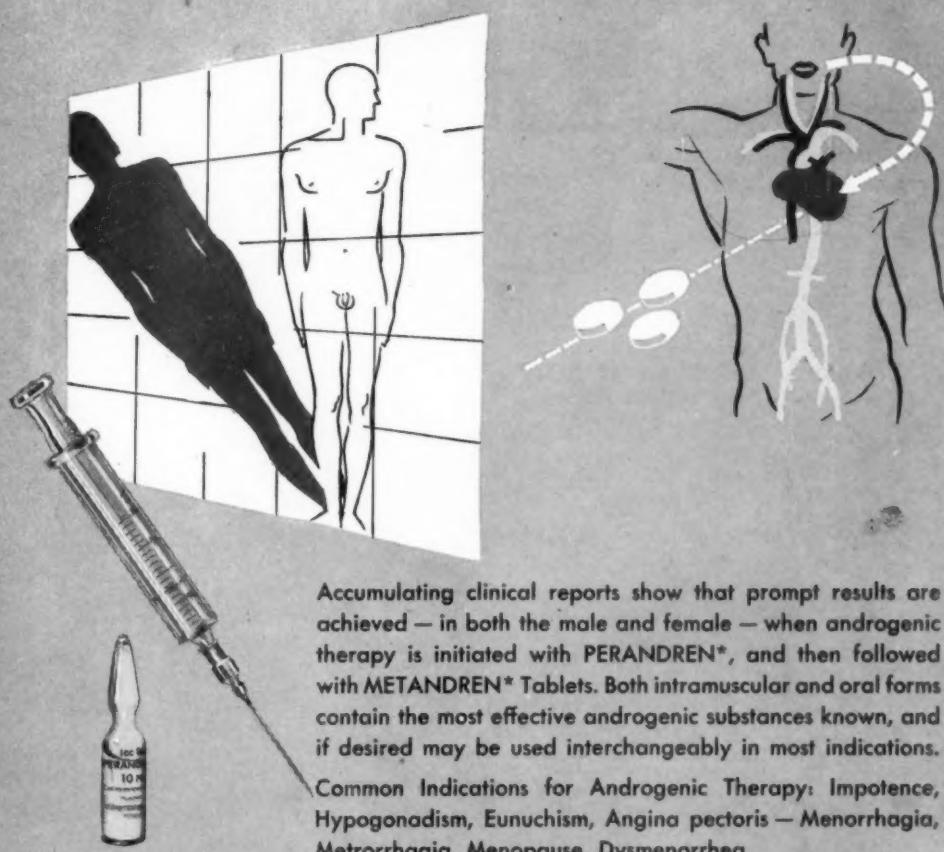
Three of the doctors testified positively that in their opinion the petitioner had not suffered a heat stroke on the day in question. Another doctor testified contra. Four of the doctors testified that in their opinion there was no residuary partial total disability. Two of them suggested that he was suffering a psychosis in the nature of an anxiety neurosis induced by the accident alone and not by an injury. Another physician suggested that his apparent nervousness might be attributable to smoking three packages of cigarettes a day.

Counsel for petitioner earnestly insists that the conclusion of the Commission demonstrates that it gave no consideration to the "uncontradicted" testimony of the petitioner—his wife—and Mr. Shobe, all lay witnesses. The record conclusively shows that the doctors all considered petitioner's subjective complaints—they admitted that the petitioner, in their opinion, was honestly concerned over his condition and the sensations which he stated that he experienced. The doctors all were of the opinion that a heat stroke may cause mental deterioration, but at least four of them were of the positive opinion that petitioner had not sustained a heat stroke in the medical contemplation of the condition labelled "heat stroke", and concluded that petitioner would not suffer the dire and severe consequences that most generally follow heat stroke.

The triers of the facts may well have concluded that petitioner's concern and nervousness were neurotic and not traceable to any injury sustained by accident arising out of and in the course of the employment. The finding of the Commission was that the claimed disability was "not proximately the result of any personal injury sustained by accident \* \* \*".

We have heretofore recognized that psychosis is a compensable disease; but before psychosis as a disease can be determined to be com-

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pensable, it must have had its origin in injury. A. S. & R. Co. v. Ind. Com (1942), 59 Ariz. 87, 123 Pae. (2d) 163. The pattern cut in the case of Phelps Dodge Corp. v. Ind. Com. and Frank Eads (1935), 46 Ariz. 162, 49 Pae. (2d) 391, fits the factual situation in the instant case relative to petitioner's subjective complaints, and we quote approvingly therefrom:

"While the commission in its findings did not so state, the only conclusion to be drawn therefrom is that the commission believed respondent's neurosis was not induced by any personal injury he suffered but by a deep-set fear or apprehension of imaginary ailments that might follow as a result of his injury and the deplorable condition in which his family might be left. There was medical testimony to sustain such a conclusion. Whether this be a correct conclusion or not, it is not necessary to determine. There being no finding that the respondent's neurosis was the result of an injury, he must necessarily fail, as our statute makes that indispensably necessary to entitle him to compensation for disease."

We conclude that there was substantial and competent evidence to sustain the finding of the Commission. We conclude further that petitioner did not carry the burden of reasonably establishing that the so-called heat stroke left any residual permanent disability.

The award is affirmed.

ARTHUR T. LaPRADE,  
 Judge.

#### CONCURRING:

HENRY D. ROSS,  
 Chief Justice.

Stanford, J. (Dissenting):

There is evidence given by physicians for the Industrial Commission that Smith cannot return to his work as a structural iron worker, which work he has been carrying on for eighteen years.

Dr. A. M. Tuthill said in his testimony that "I don't know what is the matter with him." And again he stated:

"THE REFEREE: Under the facts in this case, would you recommend this man to go back to work and perform his duties as an iron worker in this climate?

A. I would think not. If he has everything he has, he is a man to stay on the ground, and I have no doubt he has the nervous symptoms he complains of, because he seems perfectly honest about it."

Dr. H. J. McKeown, also called by the Industrial Commission, testified:

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can you offer any explanation as to the cause of the subjective symptoms he related to you if it wasn't heat stroke or heat exhaustion?

A. I couldn't give you a cause for his present trouble at the present time, other than some neurosis.

Q. What was that neurosis caused by, if you know?

A. Well, he could have a fear of quitting his former occupation, just thinking about it.

Q. Wouldn't that have a lasting effect, that fear? Wouldn't that have a lasting effect?

A. It might for a few years, until he proved to himself that he was better than he thought he was.

Q. It would have to be something he would have to overcome, if he could?

A. Yes, this neurosis.

Q. And would you say that would handicap him in any line of work he performed, or might subject him to a recurrence of what has been recited here?

A. Well, it wouldn't be safe for him to be working high off the ground in structural steel work."

Under the power of the Industrial Commission they could let this man go with or without compensation and hold the matter under their control until they knew definitely what he could do. If it is a fact that a man of his training, because of this work and the injury caused thereby, has to be reduced to a job on the ground that would pay him but a meager wage, then his case should be kept under the control of the Industrial Commission until such time as they could determine definitely what his rights should be.

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\* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*  
*Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60*



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## Book Reviews

"HAYFEVER PLANTS", By Roger P. Wodehouse, Ph. D. 1945, Waltham, Mass., The Chronica Botanica Co.; San Francisco, J. W. Stacey Inc., 245 pages; illustrated; price, \$4.75.

The author, a veteran botanist long associated with physicians, attempts "to interpret the botanical facts of hayfever in terms of their clinical significances". Starting with the justifiable assumption that most of us have forgotten the most of such botany as we ever knew, he devotes his first chapter to a crisply written review that brings back the relatively few details of that science that are essential to the understanding of airborne pollens and of the plants that release them. In this, as in the chapters that follow, he writes plain English and avoids so far as possible the involved technical language of the laboratory botanist.

He then takes up the natural order the hayfever plants, known or suspected, of North America. Each species is recognizably described, and the more important are illustrated. The pollen production of each is roughly evaluated, and there are excellant sketches of the pollen grains, this being the author's specialty.

The book ends with a series of regional surveys, the region being determined by the distribution of the offending plants. The purpose is to show what pollinates where, when and how much. This publication will help the allergist to answer the awkward question: "Doctor, will I have hay fever or asthma if I go to such-and-such a place?" Even so, the answer should be qualified. For example, Arizona, with New Mexico and western Texas, make up the region called the Southwest. The wide variations in altitude, moisture, and cultivation make the chart only approximate for any given place in this region. Accurate knowledge of local conditions is necessary for successful pollen therapy, and such information must be timely, up to the season. The shift of population the increase in cultivated areas, and the unpredictable variations in the climate of the Southwest continues to alter the pollen picture, and the more recent changes have not been reported. It might be a good idea to require all workers in pollen allergy to bring their material up to date at intervals of about five years, either confirming their earlier reports or else declaring all previous publications on pollen incidence, as in a last will and testament, to be null and void.

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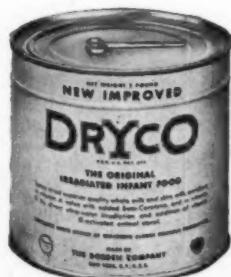
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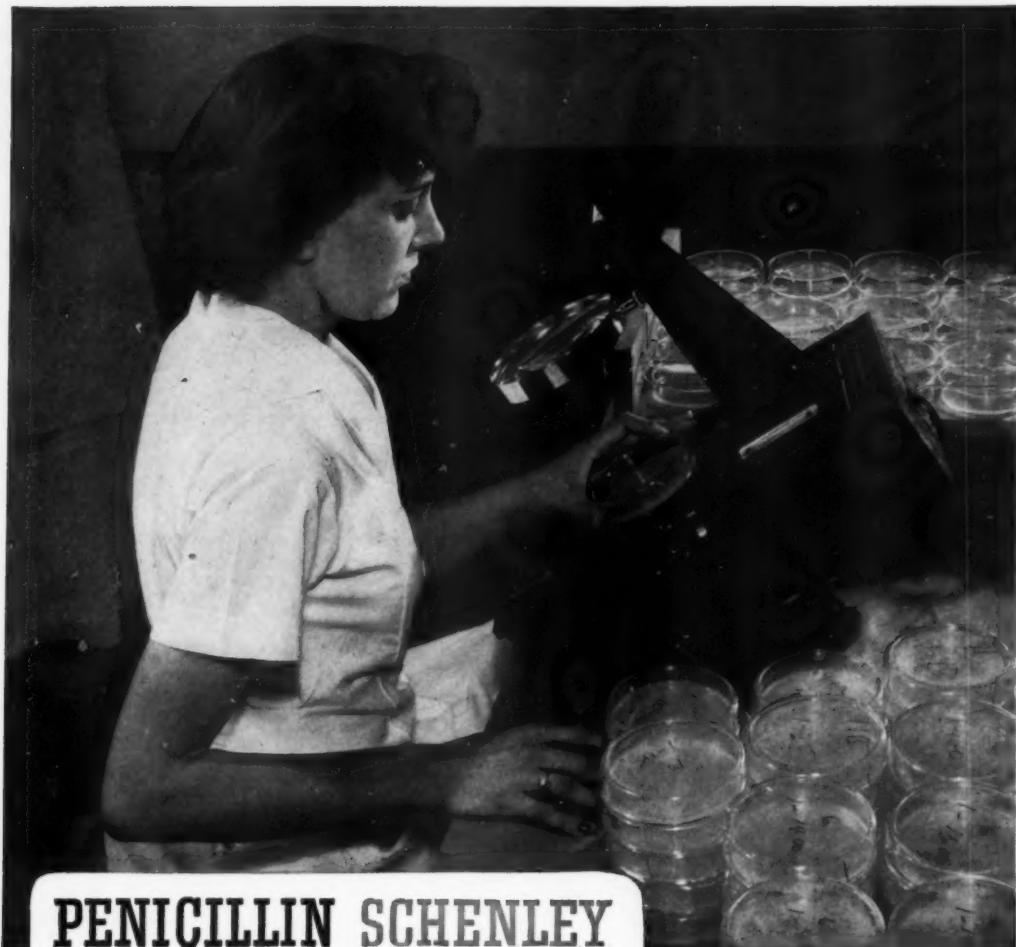
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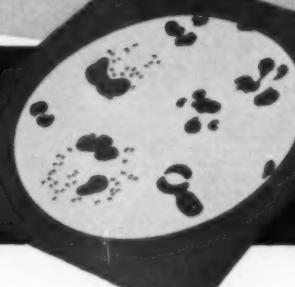
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*Frisch, A. W.; Behr, B.; Edwards, R. B., and Edwards, M. W., Am. J. Syph., Gonor., & Ven. Dis. 28:527 (Sept.) 1944.*

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*Greenblatt, R. B., and Street, A. R., J. A. M. A. 126:161 (Sept. 16) 1944.*

At a U. S. Naval Hospital, 200 cases of sulfonamide-resistant gonorrhea treated with penicillin, showed no toxic reactions; all returned to duty in one-third of the time previously required.

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191 consecutive cases of sulfonamide-resistant gonorrhea responded dramatically to penicillin.

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No toxic effects were observed in a series of sulfonamide-resistant gonorrhea of the female treated with penicillin. As compared to hyperpyrexia, penicillin treatment "is incomparably easier, simpler, safer, cheaper, and just as effective."

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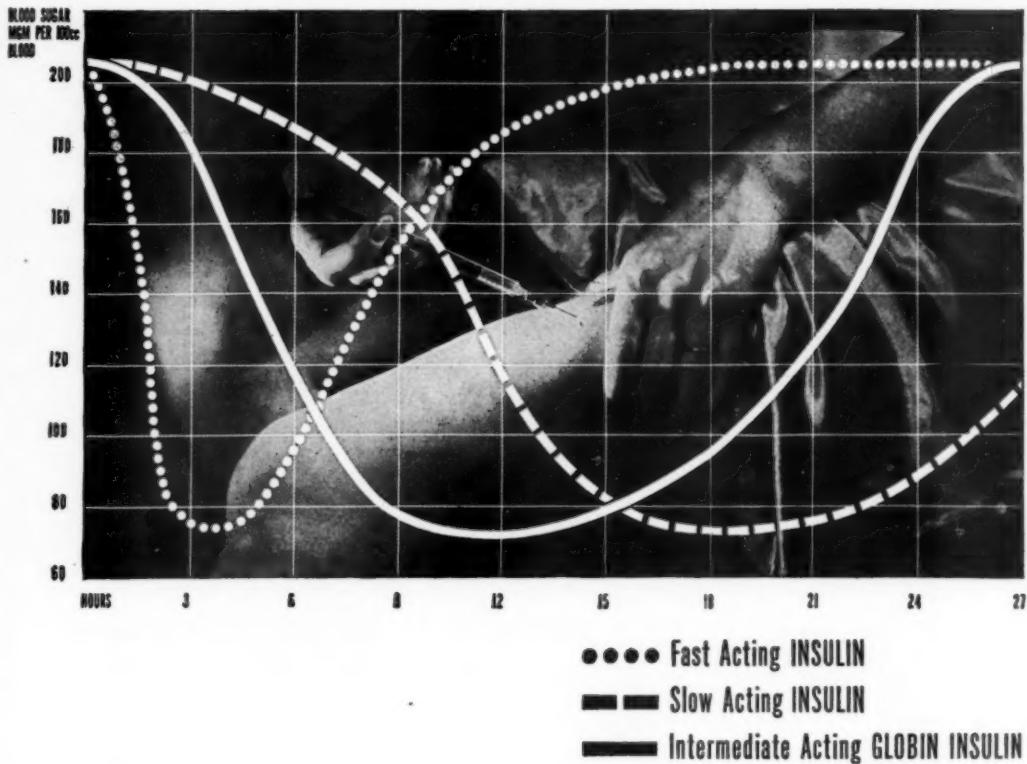
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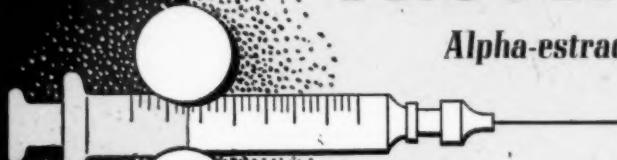
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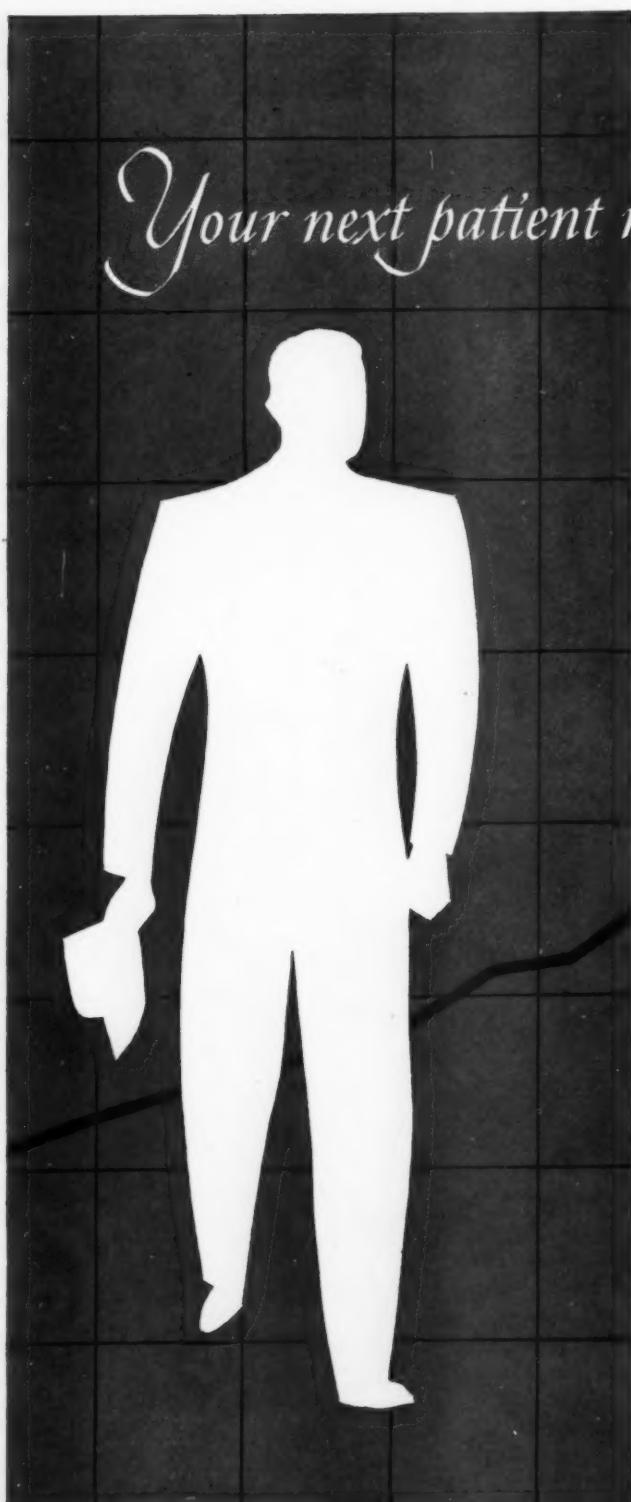


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\*Blotner, H., and Hyde, R. W.: New England J. Med., 229:385, 1943.

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## VIRGINAL HYPERSTROPHY OF THE BREAST

KARL S. HARRIS, M. D. F. A. C. S.

and

MAURICE ROSENTHAL, M. D.

*Phoenix, Arizona*

**VIRGINAL** hypertrophy, a functional aberration of normal breast development, is not a common disorder but does occur with sufficient frequency to warrant its recognition. The growth of the breast accompanying the development of secondary sexual characteristics is supposedly controlled by hormonal stimulation or a shift in the hormonal balance, the pituitary and the ovarian hormones being chiefly concerned. Other functional changes, namely, the change involved in the menstrual cycle and the mobilization for lactation, are also brought about by hormonal stimulation or by a shift in the hormonal balance. The mass of the ordinary breast is largely composed of fat and supporting fibrous tissue for which the internal secretions of the anterior pituitary are responsible. The development of the ducts and the proliferation of the periductal connective tissues is induced estrogenic stimulation.

In the female, a hormonal imbalance or continued stimulation by estrogenic substance may lead to an overgrowth of the breast, the condition known as virginal hypertrophy. There are undoubtedly all gradations of the condition, but in the extreme instances it forms one of the curiosities of growth. The size may not only be a source of embarrassment, but may be of such magnitude as to be an actual physical handicap. These patients have poor posture, round shoulders, and various complaints due to the excess weight of the breast. Growth of the breast takes place most rapidly during puberty or pregnancy and is usually bilateral. When unilateral enlargement is noted lipoma or fibroadenoma of the breast must be suspected.

Virginal hypertrophy is a benign condition but patients having the disorder frequently demand treatment, not only for cosmetic reasons but because the size and weight are such a physical impairment. With minor degrees of virginal hypertrophy hormonal therapy may be of some value, but when the condition is marked usually some type of plastic surgery is required. Ideally the nipple and areola may be transplanted, and the hypertrophied breast tissue

excised leaving as much fat as possible to simulate the breast. An excellent technique for reconstruction of breast has been described by Edward S. Lamond.<sup>1</sup>

The pathologic change of virginal hypertrophy consists of marked increase in the periductal and interlobular connective tissue. The mammary ducts frequently are increased in size and in number, and are commonly surrounded by varying numbers of lymphocytes. The lining epithelial cells may show hyperplasia and hypertrophy of the cells. In some cases, there is a marked preponderance of the fibrous tissue which may show hyaline degeneration; this sclerotic process may compress some of the ducts with resulting atrophy of some of the smaller branches. Occasionally, where there is a rapid proliferation of fibrous tissue, the dilated ducts are invaginated and villus processes are found within the ducts. This histologic picture resembles intra-canicular fibroadenoma. In some sections, lobule formations may be a prominent feature. Diffuse virginal hypertrophy may be associated with multiple fibroadenoma, as demonstrated by the ease to



Figure 1



Figure 2

be presented. In rare instances, malignant changes may occur, or the dilated ducts may become secondarily infected with the development of multiple abscesses throughout the breasts. Atrophy, ulceration and necrosis of the stretched, overlying skin is not an infrequent complication.

The case to be described is that of a 15-year-old colored girl with virginal hyperplasia developing at puberty. The condition had been allowed to advance to a marked degree probably due to family conditions.

#### CASE HISTORY

**PAST HISTORY:** A 15-year-old, unmarried, colored, school girl had always had excellent health. Development had been normal. Menses began at the age of 12, were regular with a 28-day cycle lasting 3 to 5 days, non-painful and requiring 2 to 3 pads per day. At the onset of menses patient had noted an enlargement of both breasts. The enlargement, however, continued to progress until the size of the breast far exceeded any of her girl associates. The girl's mother was dead, she lived with her father and was sensitive and shy because of the size

of her breasts. For this reason she confided in no one and attempted to make them less noticeable by making a tight fitting muslin jacket. She asked her father to take her to a physician only when the right breast became ulcerated and began to drain.

**EXAMINATION:** The patient was a well developed, well nourished, young, colored female. She measured 60 inches in height and weighed 120 pounds. Physical examination was essentially normal except for poor posture, round shoulders, and breasts which were markedly enlarged and pendulous (Fig. 1 & 2). The breasts were composed of nodules of firm tissue about the size of golf balls, discrete, non-tender with no fixation to skin or chest wall. The nipples were not retracted although the right nipple was weeping with adjacent ulceration. There were numerous dilated veins throughout both breasts. There were enlarged axillary lymph nodes.

**LABORATORY DATA:** The Wasserman test was negative. Hemoglobin was 84%; Red blood count 4,790,000; white blood count 8,200, with differential blood count within normal limits. Urine examination showed no abnormality.

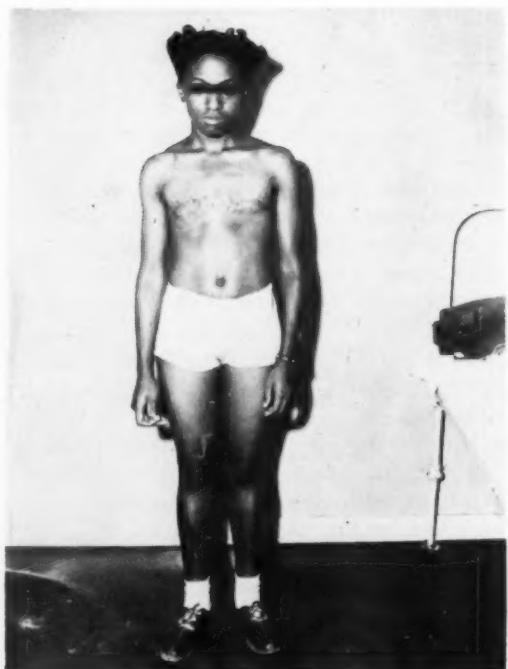


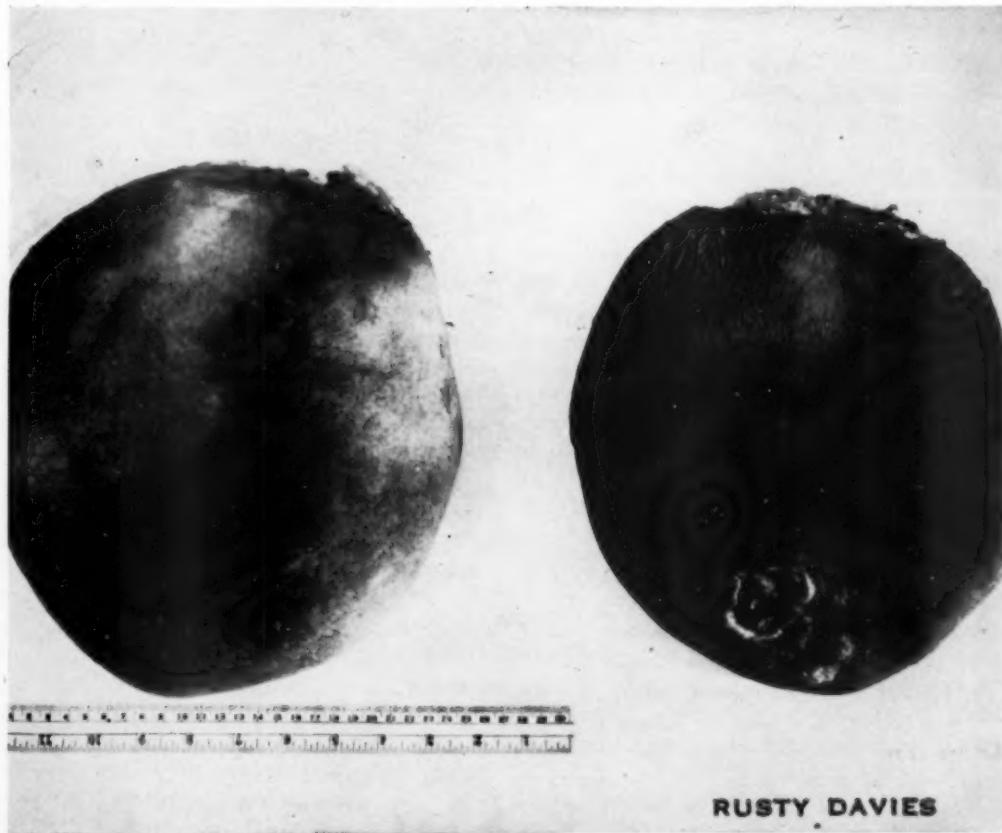
Figure 3

**TREATMENT:** The ulceration about the right nipple and areola precluded any plastic procedure on the right breast with preservation of the nipple, and limited finances made it mandatory that her hospitalization be kept at a minimum. A bilateral simple mastectomy was decided to be the treatment of choice. This was carried out as a one-stage procedure. (Fig. 3). Her postoperative course was uneventful and the wounds healed by primary intention.

**MACROSCOPIC EXAMINATION:** The specimen consists of two massive breasts (Fig. 4-5). The largest breast presented an ulcerated area of the skin, near the nipple which measured 5 cms. in diameter. The remaining skin surface showed no gross change of pathological significance. When multiple cross sections of both breasts were made, numerous light greyish-white, firm nodules which projected above the cut surface were found. These varied considerably in size and measured from 1 to 6 cms. in diameter. The intervening tissue was fibrous

in character, but edematous and moderately soft in consistency. No large areas of cystic degeneration, nor hemorrhages were found.

**MICROSCOPIC EXAMINATION:** Sections through the breast tissue showed a proliferation of the fibrous and epithelial elements. In some sections, there was a preponderance and rapid growth of the fibrous tissue over the epithelial elements. In these areas, the ducts were increased in size and in number. Small lobule formations of gland acini were also seen. The dilated ducts were invaginated by the rapidly encroaching fibroblastic tissue, and the histologic appearance was that of an intracanalicular fibroadenoma. In some areas, there was a moderate hyperplasia of the lining epithelium with desquamation and degeneration of some of the cells. There was also marked edema with a moderate number of lymphocytes and plasma cells infiltrating the periductal and perilobular fibrous tissue. Areas were also found in which there was hyaline degeneration of the fibrous tissue



RUSTY DAVIES

Figure 4

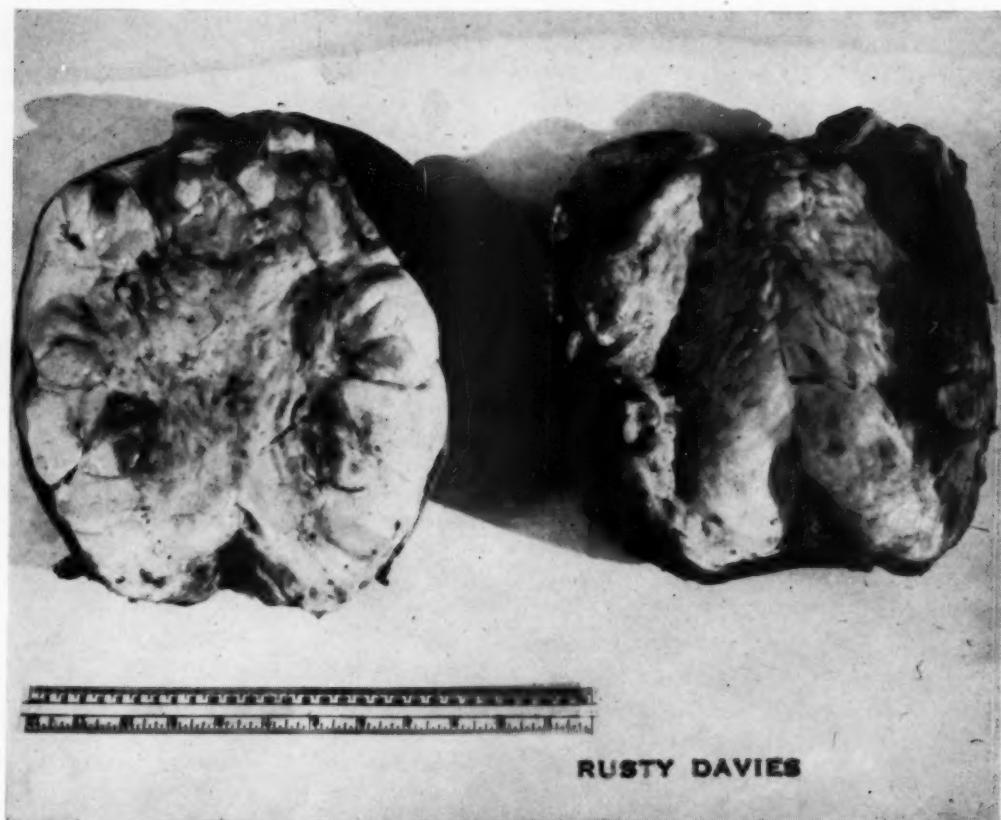


Figure 5

resulting in constriction of the dilated ducts. Sections through the ulcerated area of the skin revealed that the epithelial surface had been denuded and the corium and subcutaneous tissue was infiltrated by lymphocytes, plasma cells and many polys. In some sections, there was atrophy of the epidermis. There was no evidence of malignancy found in any of the sections studied. Diagnosis: Virginal hypertrophy of the breasts with multiple fibroadenomata.

RUSTY DAVIES

## DISCUSSION

Virginal hypertrophy of the breast is a functional aberration in breast development as is gynecomastia in the male and is due to an abnormal hormonal stimulation or imbalance. The case reported here is an example, but it could not be ideally treated because of the ulceration present.

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## THE MANAGEMENT OF THE CLEFT LIP

J. M. OVENS, M. D.  
Phoenix, Arizona

**H**AIR lip, or more properly called cleft lip, is a condition caused by failure of union of two or more parts of the face before the tenth week of fetal life. Cleft lip occurs in approximately one in 2000 births. The cleft may be unilateral or bilateral. Unilateral cleft on the left side is the most frequent variety.

## ETIOLOGY

The cause of cleft lip is unknown. Many factors are given however and they may be briefly listed as follows:

## A. Predisposing Causes.

1. Heredity—very frequently close or distant relatives of a patient with cleft of lip or palate

or lesions which are at first unnoticed, such as will have easily demonstrable similar lesions a small notching in the lip, a small notching in one side of the mouth with a tendency toward macrostomia or a minutely bifid uvula. Not infrequently the parents are affected or a brother or sister has the same condition.

2. Sex—the lesions are found 50% more frequently in males than in females.

3. Lack of proper nutrition—lack of proper nutrition during the early days of fetal development is also listed as a cause. This, however, has no scientific background. The effect of hyperemesis gravidarum on the nourishment of the fetus is unknown.

4. Different mechanical theories—different mechanical theories have been advanced for failure of the cleft to close. Some of these can be mentioned as extreme flexure of the head, pressure of the tongue and mandibular processes on the early developing parts.

5. Prenatal maternal impressions—prenatal impressions have been mentioned as a cause but are most probably without foundation.

#### B. Actual Cause.

The actual cause of cleft lip is a failure of union of the globular process with the prolabium and the lateral nasal processes. The union normally occurs about the sixth week of development. By the eighth week development is normally completed and the lip has fused. It is not until the tenth or twelfth week that the palate has fused, however. It is believed that the parts are always present at birth and only by failure of their union does cleft of the palate result. None of the necessary parts are ever found absent. It is for this reason that repair can be done.

#### WHEN TO OPERATE?

There are several different opinions concerning the best time to operate for closure of the cleft of the lip or palate. It is my contention that a cleft of the lip and nostril should be closed as soon after birth as possible. This will also include alveolar clefts of the hard palate. Suffice it to say for the present that clefts of the hard and soft palate are closed at a later date. It is best to wait until ten to fourteen days after the baby has been born and has regained its initial weight loss to proceed with surgery. Many of these babies will prove difficult to feed, and the matter of regaining their original weight loss may be quite lengthy

unless great care is taken in feeding the baby. Feeding problems are all too frequent these days.

Figure I represents a robust, healthy baby approximately three months after operation for closure of a cleft of the lip and nostril. This baby was so robust that it was operated upon about three days after birth. It developed into quite a feeding problem and lost considerable weight before it was finally on the upgrade with special formula prescribed by its pediatrician. By waiting until the baby has regained its original birth weight, one does not run such a risk. The reason for closing the alveolar process of the palate with the lip and nostril at the first stage of the operation is because later on the alveolar process becomes calcified, and it is much more difficult to fracture this down into position. When done within the first few weeks of life with the lip and nostril still cartilaginous it can be reduced with digital pressure and maintained there by the pressure of the corrected lip and nostril.

Figure II represents a complete cleft of the lip and nostril with a cleft of the alveolar process of the palate only. There is here quite a degree of upward and outward rotation of the pre-maxilla (note arrow in the photograph). At operation approximately fourteen days after birth digital pressure was all that was necessary to bring the pre-maxilla into position. After this the corrected lip and nostril held the alveolar process correctly.

Figure III (a) represents a child, aged nine months, who was born with an incomplete cleft of the lip and complete cleft of the hard and soft palate. At the age of two weeks the baby was operated on and an attempt made to close both the hard and soft palate. The wound sloughed and according to the mother's words, "the hole in the top of the palate was a lot larger after operation than before operation." I first saw the child at the age of seven months. Note in figure III (a) the central incision on the left has erupted at a ninety degree angle, facing toward the left. At operation the lip, nostril and alveolar cleft of the palate were corrected. Correction of this is much more difficult because of the calcification that has taken part in the pre-maxilla. This child will need a secondary cosmetic repair of the lip and nostril at a later date. Figure III (b) represents the post operative condition.



Fig 1



Fig 2



Fig 3a



Fig 3b



Fig 4a



Fig 4b

### ANESTHESIA

We prefer pre-medication consisting of four cubic centimeters of Elixir of Phenobarbital and use no atropine pre-operatively. The patient is induced with either drip anesthesia, and shortly before the commencement of the operation, this is changed to blow ether vapor. The surgeon sits at the head of the table and the patient is tilted with the head down at an angle of approximately thirty-five degrees. We prefer to keep the baby very light and do not mind a slight amount of motion at certain times during the operation. The patient should be absolutely motionless at other times however.

### TECHNIQUE OF OPERATION

We have no standard technique for repair of these congenital deformities and believe that one technique may be superior in one instance where another may be much better in a second case. However, in most of these repairs, we do use a personal modification of the Blair-Mirrauet technique. The primary principle is to obtain symmetry of the nostrils on both sides. The lip can usually be brought into position after this is obtained; however, the opposite is not true. Complete mobilization of both lips, the ala nasae, and the columella is necessary to obtain this. When operation is carried out at the correct time, the premaxilla can be reduced to normal position with digital pressure. The edges of the cleft lip are pared, according to the technique to be used, and the structures approximated anatomically, care being taken to advance the lip far enough anteriorly to obtain a full upper lip.

Figure IV (a) and (b) show the preoperative condition and post operative condition of a child aged ten days, suffering from a complete uni-lateral cleft of the lip, hard and soft palate. Digital pressure was all that was needed to restore the extremely rotated premaxilla to normal position where it was retained by labial pressure. The nostrils are bilaterally symmetrical and a good cosmetic result has been obtained. Figure IV (b) represents the child's condition two weeks following IV (a).

Figure V (a) represents an infant aged four months in which the cleft of the lip unilateral and incomplete and the rotation of the premaxilla is not so extreme as that in IV (a). However, repair was much more difficult and a wire suture above the permanent teeth buds

was necessary to retain the pre-maxilla in position. Figure V (b) shows this same child two weeks post-operatively.

Figure VI (a) and (b) show the pre and post operative results obtained with a baby aged five months operated upon for complete cleft of the lip and alveolar portion only of the hard palate. One will note that the scar here taken in the picture VI (b) taken two weeks post operatively is much more prominent than in the next picture VII (b) which was taken two weeks after VII (a). In figure VI chromic 00000 was used to approximate the deeper structures, and the skin as well, with resultant small areas of inflammation surrounding each catgut suture. In VII (a) and (b) there was no such occurrence. Note that the scar in VII (b) is hardly discernible while that in VI (b) is very marked.

Figure VIII (b) represents the post operative condition of the same baby as in VIII (a). This patient had an incomplete cleft of the lip. Here 00000 black silk was used. The sutures were removed in forty-eight hours. There are no stich marks present.

### POST-OPERATIVE CARE

Immediately after operation a Logan bow is applied and post-operatively the baby is given a subcutaneous infusion of 250 cubic centimeters of isotonic saline or distilled water. The baby is kept in Trendelenburg position until it has completely regained consciousness. Water is given by mouth the first day and following that the regular formula is given. Providing there is no defect in the palate which will need repair later on, the baby is allowed to feed from a bottle as if no operation had been done. When, however, there is present a defect in the palate which will necessitate closure later on the baby is fed accordingly. The Logan Bow is kept in position for five days. During this time the wound is cleansed as often as is necessary with hydrogen peroxide solution, sulfanilamide powder is blown over the area, and a mixture of balsam of peru, one part, and castor oil, four parts, is applied to prevent firm crusts from forming. Arm restraints are kept in position until the wound is healed.

### SUMMARY

1. The development of the nose, lip, cheek, and, palate normally occurs before the sixteenth week of development.





Fig 8a



Fig 8b

2. The opportune time for operation upon clefts of the lip and alveolar portion of the palate is after the baby has regained its original weight loss or approximately ten to fifteen days after the baby is born.

3. Reconstruction of the nostril should take precedent over reconstruction of the lip in the repair of these conditions, as when the nostrils

are correctly reconstructed, the lip symmetry will follow but not vice versa.

4. Black silk is superior to fine catgut for the repair of these conditions.

5. The wound should be scrupulously cared for afterwards and the arms fully restrained.

**NOTE:**

Abstract of paper read at Good Samaritan Staff Meeting, July 23, 1944.

## FRACTURE THERAPY IN THE COMMUNITY HOSPITAL STRESSING THE LIMITED NEED FOR OPEN REDUCTION.

H. A. BARNES, M. D., M. S. C.\*  
Lt. Cdr. M. C. (V) (S) USNR

**I**N the past few years there has been a healthy revival of interest in traumatotherapy, with improved methods of fracture treatment being constantly evolved through the efforts of interested surgeons and the fracture committee of the American College of Surgeons. With the trauma of war and present day industrial accidents, numerous new problems are presented with reference to the transportation of the injured, the treatment of shock and hemorrhage and the reduction of fractures and their care.

Accidents caused by high speed automotive travel, industrial hazards and global warfare have resulted in a healthy interest in fracture problems. The management and treatment of fractures today, as in the past, requires the

soundest judgment in *diagnosis, treatment, and after care* and should be treated by men who have general surgical experience with practical aptitudes, and a state of mind willing to cope with the numerous problems as they arise from the period of early treatment of shock, fixation of the fracture, and the subsequent restoration of the patient to gainful occupation.

Not everyone is endowed with the necessary mechanical ingenuity required for skillful fracture treatment, however, surgeons of diverse abilities are required to treat fractures. The severe multiple extremity fractures of modern day travel and global warfare do not always occur near metropolitan centers where numerous surgical and orthopedic attendants are available; hence, a dispersion of good fracture surgeons

\* Formerly of Flagstaff, Arizona.

is everywhere a necessity. Too often this work is assigned to younger men, irrespective of their training, aptitude, or interest in traumatotherapy. Preferably there should be one in every group that conducts fracture work, who combines other branches of surgery to cope with muscles, nerves, and visceral injuries as they are encountered in severe fractures.

My own particular interest in the closed method of reduction of fractures was stimulated when a professor in a well-known medical school berated an overzealous operator, who reduced ninety per cent of his fractures by the open method. Surgeons generally believe that early reduction with adequate immobilization—particularly the compounding of simple fractures to obtain better anatomical reposition of fragments—and in some instances only to satisfy the vanity of an impatient operator.

A recent survey conducted by the American Hospital Association, reveals that seventy-five per cent of the hospitals of the United States are less than one-hundred bed capacity. The small hospital stands as an institution eager to serve rich and poor alike in time of need, having little to do with creed and knowing no boundaries of nationality, as it pours its personality into the life of the community. Its successes attract little attention, but its failures are common gossip.

Statistics of Casualty Insurance Companies reveal that two-thirds of all major automobile accidents occur in rural sections, demonstrating that our high-speed machine age accounts for an increasing number of fractures in county hospitals—regardless of the professional capacity of the staff personnel or the hospital facilities to care for them. Many such victims are injured at great distances from their homes; hence, in emergencies they have little choice in the selection of their fracture surgeons. Thus, the responsibility for their treatment rests entirely upon the institution to which they are admitted and upon the physician personnel of the hospital.

The type of fracture encountered in industry, road accidents, and in war follows no set plan. As example, the fractured pelvis with a possible ruptured bladder, the compound fractured pelvis with a question of gas bacillus infection, and the fractured rib complicated with an increasing hemothorax—all call for

expert training and judgment in clinical surgery.

The reasons set forth by William T. Hammond<sup>7</sup> for poor fracture treatment in small hospitals are as follows: (1) lack of interest—everyone with hospital privileges assuming the responsibility of treating all types of fractures, (2) the common belief that every doctor can set a broken bone, and (3) the fact that the responsibility of fracture work is often relegated to the youngest and most inexperienced staff member regardless of training, aptitude and interest.

An analysis of a group of cases in one of the larger hospitals in the United States revealed that a considerable number of patients admitted for open reduction, for onlay and inlay grafts, and for bone plating were referred from small hospitals where there was no one sufficiently qualified and experienced to attempt such operations. Evidently these cases had been treated by men who were not trained in fracture treatment, because the study of clinical histories and Roentgenograms indicated that proper early reduction and immobilization would have made *open* operation unnecessary in the majority of cases.

The exhibition of x-rays in court rooms before compensation boards together with periodic follow-up studies has shocked conscientious observers concerning the volume of poor fracture work in the smaller communities.

Through the Committee on Fractures, the American College of Surgeons has accomplished a great deal in improving the care of fractures in hospitals generally. By cooperative work with competent surgeons interested in fracture therapy, the College has obtained data revealing shortcomings in the general treatment of fractures and the necessity for the improvement of this treatment. After investigation and an analysis of information collected, a minimum standard for transportation and emergency treatment of fractures has been formulated with the detailed work of raising the standards relegated to regional fracture committee throughout the country for supervision.

#### THE AIM OF FRACTURE TREATMENT

In establishing the general principles of fracture treatment, the actual conditions at the site of fracture are of greatest importance. These may vary from a simple crack in the bone with no displacement and with the slightest

disturbance of surrounding tissue, to a lesion of the greatest severity with marked displacement of bony fragments, with considerable damage to all neighboring tissues. It may be necessary to make an immediate decision between amputation and conservative treatment, and in such a situation the surgeon must estimate the gross damage, and the question of blood supply to the injured parts. Such problems, if they occur where no consultant is available, are left to the judgment of the individual practitioner to be handled as his skill and his equipment may dictate.

#### THE CONSERVATIVE MANAGEMENT OF FRACTURES

While there are fundamentally innumerable approaches to the treatment of fractures, the philosophy of *reduction*, *rigid fixation*, *traction*, *immobilization*, and *open reduction* still hold in the order of their importance as listed.

From the functional viewpoint, the goal of treatment in traumatic lesions of bones and joints—as in other disabilities—is functional restoration in the shortest possible time. Rigidity and preservation of original anatomic form are obvious necessities to provide a mechanism for the action of muscles and joints. This, while an accepted statement of facts, is not all; the ability to function is very much dependent upon a healthy condition of muscles and joints with an intact and adequate circulation and nerve supply. Patients left with stiff joints and useless appendages find little consolation in x-ray perfection, and in the knowledge of perfect alignment for weight bearing, with poor healing. Muscle pulls must be used to advantage to prevent displacements and deformities in the repair process. Melvin Henderson states that the most unfortunate deformities take place in the ambulant patient.<sup>8</sup> That this is not always a truism is a fact illustrated by the users of the principle of fixation of fracture fragments with pins. Their incorporation in rigid plaster fixation allows early ambulation and decreases both the incidence of traumatic arthritis and the secondary degenerative immobilization changes in joint structures which usually require strenuous physiotherapy in later months, and often defeat the good accomplished by the original procedure. Deformity does not always mean dysfunction; deformity with function is preferable to perfect anatomic restoration with associated loss of earning

power. *Function*, necessarily to the individual's gainful occupation, should be the goal in treatment.

#### CONSERVATIVE TREATMENT OF FRACTURES

Modern fracture treatment is rife with the invention of gadgets with a multiplicity of levers, screws, nuts, weights, and springs designed to fit fracture therapy into the present machine age. There is no argument that streamlining is needed for simplicity's sake.

The Surgical Clinics of the Hospital of the University of Pennsylvania state the following facts with respect to closed reduction and the conservative management of fractures:

"That, (1) Their results are improving from year to year.

(2) There is an increase in the success of primary fluoroscopic closed reductions.

(3) Open reduction was necessary only in 7.3 per cent of their cases in 3 years.

(4) Metal internal fixation was necessary in only 18.3 per cent of cases."

If the better-staffed clinics (where many more fractures are treated than in the small hospitals) can limit themselves to such relatively low figures for open reduction with good results, it is desired that well-trained men in small communities can aspire to do the same—with fewer disastrous results.

In 1927, Seudder<sup>11</sup> prophesied the limited need for open reduction when he stated, "it must be borne in mind that the proper use of skeletal traction applied to the condyles of the femur, the tibial crest, the malleoli or the os calcis may diminish the necessity for the use of operative treatment by direct incision."

#### INDICATIONS FOR OPEN TREATMENT OF FRACTURES

Fractures usually come under three groups. (1) those never operated on, (2) those always operated on, and (3) those in which operation must be looked upon as of doubtful applicability. In the first group are Colles' fracture, clavicle fractures, and childhood and birth fractures. In the second group are listed patellar fractures with wide separation of bony fragments, some fractures of the head or neck of the radius, the radial shaft with displacement, certain spiral or oblique fractures of both bones of the leg in the middle or lower third, some fractures of the olecranon, and fractures of the os calcis

in which one line of fractures enters the astragalo-calcaneal joint.

Scudder states that the following be implied: "That (1) The highest-degree of safety to the patient should be maintained at all times.

(2) The surgeon and his associates are skilled in the use of the treatment.

(3) The surgeon possesses ability greater than that needed for the ordinary care legally required.

(4) The surgeon has available the necessary instruments and apparatus.

(5) The anesthesia be properly conducted and safe.

(6) The pre-and Post-operative care be adequate and supervised by the fracture surgeon.

(7) *Selection of treatment only after due deliberation, that other more conservative methods will fail.*

These desiderata for open operation do not always exist in the hospital in every small community. In the small hospital more men are operating and reducing fractures because of the lesser staff restrictions placed upon their ability to treat fractures by the open method. In larger localities where more rigid staff restrictions are enforced, there are fewer open operations by the incapable.

Quoting Dr. E. S. Ellison<sup>5</sup>: "Open reduction may be fraught with great danger of loss of function, limb, or even life. The promiscuous teaching of this method has brought sorrow to many in its application. This refinement in treatment should be resorted to only after much deliberation. If experience reveals that the fracture under consideration will heal with good function despite its displacement, let sleeping dogs lie and treat the fracture by the closed method."<sup>6</sup> Often the motive for open reduction is based upon the attainment of more perfect anatomical result without taking into consideration that absolute assurance of a perfect result is imperative when undertaking open reduction. This assurance must be based upon experience in fracture surgery, the bone or bones involved, the level of the fractures, the patient's age, and the age of the fracture.

#### CLOSED VERSUS OPEN REDUCTION

There is nothing new about the principles that should be observed by every surgeon who accepts the responsibility of converting a closed

into an open fracture. Some of the principles as stressed by Herbert P. Galloway, M. D., consulting orthopedic surgeon to Winnipeg Hospital, are as follows:<sup>6</sup>

"1. If in doubt as to whether to try open or closed reduction, try closed methods first.

2. No surgeon should accept the responsibility of converting a closed into an open fracture unless he has sufficient ability and experience to utilize aseptic methods.

3. The surgical environment must be proper."

The work of Sir Arbuthnot Lane in popularizing bone plating has done more harm than good in some instances—not realizing at the time that a method of treatment can be more or less an obsession with its originator. To illustrate a case of "Lane plating" of a simple fracture of the tibia with two plates, are the remarks of an intern spoken to the gallery of visiting physicians in Lane's clinic: "I struggled for an hour and a half yesterday plating a T-fracture of the humerus." No less a person than Sir Robert Jones of Liverpool would have carefully reduced the fracture in a manipulative manner and secured a better functional if not anatomical end-result.

#### DANGER OF OPERATIVE TREATMENT OF FRACTURES

In the adoption of the operative treatment of a fracture, the surgeon should visualize potential dangers in order that they may be minimized or avoided. He does not need to operate on many fractures or view the work of others to become personally aware of these difficulties and dangers.<sup>4</sup>

*Infection* is the most common disaster associated with the open method. Bone is more susceptible to infection than any other tissue. Unusual precaution therefore, must be taken in spite of supplemental chemotherapy with sulphonamides and penicillin.

*Hemorrhage* is due more often to faulty approach than to imperfect vascular control. Most of the long bones can be reached by "dry routes". Many men are too indolent or perhaps uninformed to study the proper anatomical approach.

*Vascular interference*: Darrah<sup>7</sup> states that delayed or nonunion can and does result from operative interference with blood supply.

The most serious effect of vascular interference is the predisposition to infection.

**Faulty material:** The use of poorly tooled materials and low grades of alloys sometimes results in pieces being broken off in the wound.

**Faulty technic:** Careless examination of the patient and of x-ray evidence, unsound appreciation of what can and what cannot be accomplished, faulty approach, improper tools, clumsy procedure, rough handling of tissues, careless immobilization and after-care are far more often to blame than the method itself.

In larger well staffed clinics there has been a definite increase in the number of open reductions. In an annual fracture report submitted by Doctor Masey<sup>10</sup> of the Mayo Clinic (1938), there were 195 open operations and 181 closed reductions with practically no mortality (.2 per cent). This can be done by master technicians and a skilled fracture team. No doubt the introduction of non-electrolytic metals has been a factor. Where there is close cooperation of various services in group medical practice, better results from open reduction will ultimately eventuate.

There are various methods of treating fractures, each method has its advantages when properly applied. Multiple methods simply add to the elasticity of one's armamentarium. One should not be a faddist and try to treat a large percentage of his fractures in any one particular way—whether it be closed or open. Certain fractures are unquestionably better treated by open operation, and one should be able to recognize such fractures in the beginning and not leave operative treatment as a last resort in such cases.

There are fractures best treated by traction, others by splinting, and a very few by open reduction. Quoting W. C. Campbell<sup>3</sup>: "Approximately ninety-five percent of fractures may be reduced by conservative measures. The remainder require open reduction. Only because of the growing demand for better anatomic alignment has the number of fractures reduced by open operation been increased. The indiscriminate practice of open reduction is to be whole-heartedly condemned. Surgery should never be recommended unless definitely warranted."

Trials of radical departure should be left to the hospitals with the opportunity to see a large number of patients and, thereby, to make

a reasonably prompt decision as to their value. Smaller clinics would do well to continue methods already generally approved, and not follow the lead of someone who has written an article in a medical journal.

Operation is indicated only when a satisfactory reduction cannot otherwise be effected or maintained as may be occasioned by (1) interposition of tissue between fragments, (2) displacement of fragments by reflex contraction of muscles, (3) constant motion from inability to fix the fragments firmly, or (4) failure of reduction by mechanical forces—as leverage, traction and pressure.<sup>3</sup>

The crux of the entire problem of fracture treatment is stated by Wilson<sup>12</sup> when he says, "by the creation of numerous paradoxes the method of obtaining one goal in fracture treatment is often the worst method of reaching the other." For the prevention of displacement during the healing process, immobilization is necessary but on the other hand, movement is essential for the maintenance of active circulation and a functioning muscle-articular apparatus. The individual surgeon must reconcile these conflicting interests, and by so doing, more perfect results will be obtained by the methods in which he is trained and most skilled."

#### CONCLUSIONS

1. The small community hospital can render effective and safe fracture therapy with a limited need for open reduction.

2. It is desirable that there be one in a group who conducts fracture work, who is also skilled in other branches of surgery necessary to care for the associated soft tissue, nerve and visceral injuries accompanying severe fractures. That this is a step in the right direction is demonstrated by the good results of group clinical efforts.

3. The majority of fractures can be managed by closed reduction the attainment of ultimate good functional results although not always perfect anatomical results.

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H. A. Barnes

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## Editorials

### The Vulgarization of Science

Webster's Dictionary of Synonyms gives for the word vulgar: common, ordinary, familiar, popular. A second choice, indicating a commonly accepted though less precise definition gives: coarse, gross obscene, ribald. The use of the term in the title of this comment implies both of these connotations is a sequence which the reader must choose for himself. We shall speak briefly of the effect of the vulgarizing influence of lay publicity upon scientific material heretofore more or less cloistered as (1) contraception; (2) artificial insemination; (3) abortion and sterilization; (4) the more esoteric angles of the psychology of sex. These few categories will exemplify a number of similar subjects—erstwhile noli me tangere—now stark naked to the brazen stares of the multitudes.

Fool would be he who strove to bar to the eager mind any legitimate field of information. No doubt the trend toward the absolute exposures of present-day lay journalism reflects a healthy element of honest will to teach and to learn. Unfortunately, however, selfish considerations and the thirst for notoriety have sadly adulterated the worthy constituents of these

trends. There is a morbid taint perceptible. The healthy appetite for knowledge is being badly fed and the public taste becomes more jaded with each monthly advent of the "Readers Digest"—each periodical appearance of De-Kruif and the doctor—panders to a morbid public taste.

In the June issue of this Journal, editorial comment concerning x-insemination or the so-called insemination of a wife by a foreign donor was discussed at some length. It was pointed out that the complete expose of this matter has in many instances worked a hardship upon a couple who have achieved a pregnancy by such means. The modus operandi is this: so many people have been exposed to a recitation of the virtues and techniques of the procedure that any known childless couple who appears with an offspring becomes subject to the long finger of suspicion. Decent guardianship of matters of this sort with a restriction to the proper setting certainly seems vastly preferable to the maudlin, often inaccurate, exposes which kept the public mind titillated with such matters.

A case in point concerns the matter of so-called selective sterilization. Recently we were called upon by a representative of a national organization known as Birthright, Inc. This organization, on the basis of endowments, aids, fosters and abets the sterilization of socially inadequate persons. No doubt there is a crying need for the type of propaganda which this organization distributes in many communities. On the other hand, the activity of such an organization which proposes to vulgarize and disseminate the tenets of the sterilizationists may work serious harm in a community where such a procedure is already well and adequately handled. These are matters which should in good taste and proper execution be handled quietly and without fuss or feathers. Opposition to such procedures is seldom to be overcome by tracts, brochures or radio harangues. The dissemination of such platitudes is apt to constitute the waving of a red flag at a bull, and in such a case serious harm may be done to a worthy cause. Here again it may be stated that

complete vulgarization of the deep scientific truths which underlie such matters might be open to serious criticism on sound bases.

Elsewhere in this Journal appears a book review by Dr. Earl Engle of Paul DeKruif's recent windy effort—*The Male Hormone* (Harcourt, Brace & Co., New York.) This delightful and perceptive dissection of another one of DeKruif's pseudo-scientific best sellers expresses delightfully our own feelings in relation to this type of opportunistic medical literary frippery. DeKruif, by the way, appears as the perfect exponent of the vulgarization of medical knowledge. To put an end to this comment it may be pointed out that DeKruif's expressed intent may be to make medical knowledge "common, ordinary, familiar, popular." His actual effect, however, too often and too completely achieves the second choice definitions which are listed at the start of this editorial comment.

Editorial reprinted from July issue of the *Western Journal of Surgery, Obstetrics and Gynecology*.



Fred Covington Jordan  
(1883-1945)

Through the minds of many of us went the thought, "another casualty on the home front," when the startling news came to us of the sudden passing of Dr. Fred C. Jordan, on Sunday morning, July 29th. Although close friends knew that he was fighting a losing battle with cardiovascular disease, the end was not expected so quickly. The home front in Maricopa County has suffered greatly since Pearl Harbor and our

confreres in service in distant areas will find several vacancies in the ranks, when they return to civilian practice. Dr. Jordan has been down several times during the past three or four years, but has always recovered and resumed his arduous practice in obstetrics and diseases of children. This time he was stricken while at home and while his wife was away from home trying to recuperate from serious illness of her own. Dr. Jordan died the next day, as he always declared he would like to pass, in active service.

He had a long and honorable career in his profession, practically all of which was spent in Maricopa County, Arizona. Born in Pleasantville, Ia., in 1883 he attended schools there and took his medical degree from Drake University College of Medicine, Des Moines, in 1908. His intern work was done at Cincinnati Lying-in-Hospital, with postgraduate work at Harvard University School of Medicine. He first located in Lewis, Iowa, where he was married in 1911 to Miss Berma Bland. In 1912 he moved to Arizona and located in Chandler where he engaged in general practice for the next fifteen years. In 1928, Dr. Jordan decided to move to Phoenix and devote himself to the practice of obstetrics, gynecology and pediatrics. He became one of the leading practitioners of Arizona in these specialties. He was active in medical organizations; never striving for office or personal advancement, he quietly and efficiently performed his duties, when called on. He was vice-president of the Maricopa County Medical Society in 1933, and later served on the Board of Censors and Library Committee. He was a charter member of the Phoenix Clinical Club which organized in 1929 and the solidarity of that organization was due in large measure to his efficient work as its secretary-treasurer, in which office he was continued from year to year until his death. He was on the active staff of all three general hospitals of Phoenix, serving on important committees. He was on the Executive Committee of St Joseph's Hospital for several years, and continued from year to year as chairman of the Obstetrical Committee of the Good Samaritan Hospital.

Dr. Jordan did not try to win recognition as a medical writer. He was faithful in attending society and staff meetings, and often presented case reports or participated in discussions, but these were seldom put in shape for publication. The same was true of his interesting and

carefully prepared diagnostic discussions before the Clinical Club. Record of only four papers published by him can be found, in his more than thirty years busy and fruitful practice in Arizona. These are:

Anesthesia in Obstetrics. Southwest. Med., April 1928.

Cerebrospinal Fever (with special reference to present epidemic). Southwest. Med., Sept., 1929.

Staphylococccic Infection in New Born Infant (case report). Southwest. Med., Jan., 1931.

Cesarian Section in Good Samaritan Hospital during 1930. Southwest. Med., Feb., 1931.

As in his medical work, so in his avocational activities, Dr. Jordan limited his attention to a few areas, but in these he showed the same abiding interest and excellence in achievement. For years he was one of the best known golfers in Arizona, winning the southwestern championship one year; this hobby his cardiac disability forced him to give up. He was a champion swimmer and noted for his underwater feats. As a member of the Phoenix Lions' Club he held the record of fifteen years unbroken attendance. Well known as a musician, he was a charter member of the Orpheus Club and of the Music Committee of the Phoenix Christian Church. For more than ten years he taught a church school class of middle age adults, first in the Central Christian Church and then in the Phoenix Christian Church.

Several times during the past four years, heart attacks gave warning of impending danger, but Dr. Jordan was not willing to give up his work, with two sons in the army and doctors so badly needed to maintain health and morale on the home front. So, with full knowledge of what it meant, but without fear, he met the summons with his boots on and, like any good soldier, doubtless thought, "this is it" when struck down while on duty. So passed another confrere and friend, one who could truthfully say, "I have fought a good fight, I have kept the faith." Family, friends, neighbors, patients, fellow citizens, in their sorrowing can justly feel pride in having known a whole hearted Christian gentleman, a faithful and skillful physician, a patriotic citizen, a real man, universally loved and respected.

Dr. Jordan is survived by his widow and two sons. Dr. F. C. Jordan, Jr. Captain in the U. S. Army Medical Corps, trained in the same special-

ties, will doubtless take over his father's practice when discharged; Corporal Wm. D. Jordan is with the U. S. Army in Panama. His mother and two sisters are still living in Des Moines, Iowa.

W. W. W.

#### GENERAL KIRK REPORTS ON MALARIA

Fear due to lack of information can cause more harm than malaria itself. Major General Norman T. Kirk, Surgeon of the Army, declared in his first public report on the effects of this disease on the individual.

With the prospects of thousands of soldiers returning to this country from malarious regions, General Kirk made an appeal for a better understanding of the problem so the public will realize that, with a few simple precautions, malaria is not a disease that should give undue concern either to infested service men or to their families.

"The soldier who, through ignorance, worries about malaria and the chances of relapse," he said, "will suffer more ill consequences than the man who understands that with proper care this disease is not of serious import from the standpoint of the patient's general health. This very knowledge will contribute considerably to the individual's well-being and fitness."

General Kirk pointed out that families should not consider soldiers infected with malaria a menace to them or the community, provided the malaria sufferer is taking treatment or promptly obtains medical care when symptoms occur.

There are a number of types of malaria, but the two that concern American troops are benign tertian malaria, which is rarely a serious disease, and malignant tertian malaria, which without treatment may be fatal. The latter type is cured by atabrine so that it is not a problem when properly treated. The attacks of malaria which soldiers will suffer after return to this country will be due to benign tertian malaria. This is the one type which is of military significance to American troops.

The service man infected with benign tertian malaria can continue with his usual arduous combat duties as long as he takes the necessary small doses of atabrine. Benign malaria is rarely cured by atabrine. However, this drug suppresses the disease. When a man with benign malaria stops taking atabrine, the usual symptoms—chills, fever, headache, and nausea—may appear.

In the majority of cases the disease has run its course after a man has suffered a few re-

lapses, and no permanent danger has been done. Out of 1,000 cases, about one third will have only one attack. There will be about 40 out of 1,000 who will suffer ten relapses, and one in 1,000 will have as many as 20 attacks. Relapses become less acute as time goes on.

When attacks do occur, the symptoms are relieved and all progress of the disease is quickly suppressed if the proper medical care is given the patient. In most cases this can be accomplished within 48 hours, according to General Kirk.

"As a result of prompt and efficient action," he said, "attacks of malaria by themselves cause only brief incapacitation and result in no permanent danger to the body."

General Kirk stressed the point that malaria can be spread only by the anopheles mosquito, even if a man is infected, the anopheles mosquito cannot transmit the disease unless it has bitten the victim during a relapse and before medical treatment has been secured. In most parts of the United States there is little likelihood of this since mosquito control measures are adequate.

Infected individuals who are not taking regular suppressive medication are particularly subject to relapse if they engage in strenuous work, if they suffer from exposure, or if they indulge in drinking to excess.

One phase of malaria treatment that causes concern to many victims is the yellow color the skin takes on as a result of using atabrine. This color is not due to jaundice or any other malfunctioning of the body. It is caused directly by the yellow color of atabrine which is deposited in the skin. The yellowness will disappear a few weeks after the use of the drug is discontinued.

Deaths due to malaria since the beginning of the war have been rare. They are nearly always associated with other diseases and with circumstances which cause delayed or inadequate treatment, Army records show. In the early stages of the Pacific war, malaria did more damage to American soldiers than Jap bullets—in disabling troops, but not in killing them.

#### THE JOURNAL OF VENEREAL DISEASE INFORMATION

Clinical Action of Penicillin on the Uterus. Herbert M. Leavitt. The Journal of Venereal Disease Information, Washington, 26: 150-153 (July), 1945.

The possibility that penicillin may have effects on the uterus similar to, but less intense than, those of ergot, also a mold product, is suggested by a review of records of pregnant women treated with penicillin at the New Mexico Intensive Treatment Center.

Of 21 pregnant women treated for syphilis or gonorrhea with penicillin, 8 manifested symptoms of uterine activity—cramps or bleeding or both. Of the 8 patients showing uterine symptoms, 2 had complete abortions immediately following the use of penicillin.

Of the 8 cases in which symptoms occurred, 7 were treated with the same lot of penicillin; 4 other pregnant patients treated with penicillin of the same lot manifested no unusual symptoms. Of 10 pregnant patients treated with penicillin made by 3 other manufacturers, only one showed symptoms. This may suggest that the observed action on the uterus may have been due to an impurity and not to the penicillin itself. Another group of physicians previously had reported 2 cases of threatened abortion following penicillin therapy for syphilis in pregnant women; they interpreted the reaction as a form of therapeutic shock rather than as the result of specific action of penicillin.

Several medical officers in charge of various rapid treatment centers have commented informally on the effects of penicillin in inducing premature menstruation or in prolonging menstruation already started. Effects of penicillin on menstruation have been observed repeatedly at the New Mexico center. Some patients with a history of delayed menstruation promptly began to bleed soon after administration of penicillin. Others bled more profusely or for longer periods of time than normal, and some bled within a week after having completed previous menstruation. A rapid survey of the records of all mature female patients of menstrual age treated with penicillin at the New Mexico center showed that 17 of 206 patients menstruated during the 24-hour period immediately following beginning of penicillin therapy; this was more than twice the 7.4 who might be expected to menstruate during any given 24-hour period. In a control survey of 253 mature female patients of menstrual age treated by methods not including penicillin only 7 women menstruated during the first 24-hour period following the beginning of treatment.

**"SULFA" IN WOUNDS DISCONTINUED**

The Army's accumulated experience in wound management does not justify the local use of any chemical agent in a wound as an anti-bacterial agent, according to the Office of The Surgeon General. The local use of crystal line sulfonamide (sulfa powder) has therefore been discontinued except in the case of serous cavities where its use, while permissible under the direction of the surgeon, is not recommended. This subject is covered by War Department Circular No. 160 as amended by W. D. Circular No. 176, 1945.

**HOSPITALS NOW—AND TOMORROW**

A. C. BACHMEYER, M. D.

Director of Study

Commission on Hospital Care

Lack of incentive for young doctors to begin practicing in rural and semi-rural areas is one of the big problems which both the public and the medical groups are facing today. Large hospitals, medical centers and city practices attract many young physicians because of well-equipped laboratories, skilled technicians and opportunity for continued study.

In vast stretches of rural America there are no hospitals and the small number of physicians which serve those areas must work without the valuable equipment and assistance which a hospital affords.

The nation's postwar planning on local, state and national levels is working toward construction of hospitals to serve those neglected areas. But before any real planning can be done it is first necessary to know exactly what hospital facilities and services are available at the present time.

So last fall the Commission on Hospital Care was established through the efforts of the American Hospital Association and was given the job of taking the vital inventory of the nation's hospital facilities. The Commission on Hospital Care is located at 22 East Division Street, Chicago 10, Illinois.

It is an impartial, fact-finding body and its members are outstanding men and women of national repute who have a sincere interest in public welfare. They include members of the medical, dental and nursing professions; hospital trustees and administrators; public health; medical education; industry; labor; agriculture; public welfare and the fields of sociology and economics.

The work is financed by grants from the Commonwealth Fund, the W. K. Kellogg Foundation and the National Foundation for Infantile Paralysis.

The objectives of the Commission on Hospital Care are to take a census of the present hospital and public health facilities in the nation; appraise their capacity for service; establish standards for evaluating physical facilities, organization and

management of hospitals; determine the over-all national need for additional facilities and service; formulate a national coordinated hospital plan and to suggest methods by which that plan can be realized.

National interest in the survey is widespread. Thirty-five states are in one phase or another of their studies. Surveys are in process or about to start in: Iowa, Massachusetts, Michigan, Minnesota, Missouri, North Dakota, New Hampshire and Wisconsin. Survey legislation has been enacted but surveys are not yet started in: Delaware, Indiana, Maine, North Carolina, New Mexico, Oklahoma, Oregon, Rhode Island, Virginia, Vermont and Washington. Survey legislation is pending in: California, Florida and South Carolina. Survey organizing committees have been established in: Illinois, Kansas, Kentucky, Louisiana, Montana, Nebraska, Ohio, Pennsylvania, Tennessee, Texas, and West Virginia. States which are proposing that the Post-War Planning Commission conduct the survey are: Alabama and New Jersey. States which have made preliminary hospital studies are: Georgia, Maryland and Utah.

The commission is conducting a pilot-study in Michigan. The inventory of Michigan's 700 hospitals, including nursing homes and other institutions for the care of the sick is now nearly completed. The method used in Michigan will serve as a pattern which other states may use in making their surveys if they so desire.

A detailed study of every hospital in the entire country would take more time and money than the Commission has at its disposal. Therefore, each state is being urged to carry on its own study. In this manner, local interest in the problem will be aroused. Each state will become immediately aware of its needs and a desire to furnish adequate hospital service will be stimulated. It is suggested that the survey be conducted by a single designated state agency in close cooperation with the state planning commission and the health department. Representatives of medical, dental and nursing professions, hospital administrators, labor, industry, agriculture, public health and welfare should be represented on each state study committee.

Although each state carries on its own study, The Commission on Hospital Care will act as a coordinating body and furnish a standard questionnaire for use by all states making the survey. Other work materials, as well as the aid of technical consultants, will be provided by the Commission. The final job of tabulating the information will be done by the Commission staff in the national office.

The hospital and the private physician are a team against sickness and disease. For a long time physicians and hospitals have worked together—and fought together—to preserve life and health. The technological advances of medicine have made that teamwork more vital and more effective than ever before.

Now that the health spotlight has swung to the hospital, we are becoming increasingly aware that there are not enough hospitals to serve everyone who needs hospital care.

But the spotlight has also swung to planning. Before we build, we have to plan, so that every area—rich or poor—will have its share of the vital hospital facilities.

That is why the Commission on Hospital Care is directing this county-by-county survey of the nation's hospitals. In this way we can put a magnifying glass to the hospital problem in each area, yet retain a picture of the overall needs of the county, the state and the nation.

It is part of the Commission's undertaking to solve the problem of uneven distribution of hospitals and physicians. We know that doctors are not attracted to areas where there are no facilities. So we must be certain that the postwar hospitals are built in the right places. Each community can't just "up—and build a hospital" but must fit itself into the plans of its neighbors.

For all these reasons, a survey to determine need is vital. The Commission on Hospital Care urges all members of the medical profession and all other public-spirited citizens to give their utmost cooperation to this inventory in order that our nation's hospitals may be built where they are needed and where they can be operated to the best advantage of all of the people.

#### THE MANAGEMENT OF DIABETES MELLITUS IN GENERAL PRACTICE

ELLIOTT P. JOSLIN

Harvard Medical School, Boston, Mass.

Two outstanding discoveries made concerning diabetes in 1943 were (1) production of diabetes by administration of alloxan and (2) demonstration that there is an unsuspected incidence of diabetes in young men. The production of the disease in animals by administration of alloxan has opened a field of investigation.

Blotner et al reported studies on 45,650 selectees and volunteers, of whom 208 had diabetes, 126 had transient glycosuria, and 33 had "renal glycosuria," a higher percentage among youths than previously reported. Joslin is of the opinion that people should be more diabetic conscious and seek medical diagnosis earlier, so that treatment may be given as early as possible, thus affording a far better prognosis. A follow-up (1942-43) of 1,626 childhood diabetics showed that 7 were in the armed forces. One case record in this group showed the patient had a furunculosis causing a high blood sugar and Joslin points out that this is a warning against diagnosing diabetes when an infection is present, unless verified by other tests after the infection has disappeared. The others of the 7 cases were probably borderline cases. At the time none received insulin except temporarily, and in only one was the carbohydrate of the diet lowered below 200 mg. The fact that all of these patients

had glycosuria was not a proof of their being diabetic.

There is a need for caution, therefore, in designating a patient a diabetic when the fasting sugar of the blood is normal, even if the two-hour blood sugar test indicates no return to the original fasting value or if intervening tests rise with capillary blood to 200 mg. or even above 200 mg., or with venous blood to 180 or as much as 220 mg.

Diabetes diagnosed early responds well to treatment. Army cases referred to the author are showing rapid improvement. The diet prescribed is 4 portions of 5 and 10 per cent carbohydrate vegetables daily; added to this 10 gm. of carbohydrate contained in a half-pint of cooked oatmeal (20 gm. more of carbohydrate); 50 gm. more found in three medium sized oranges or a total of 100 gm.; then bread, one slice, or approximately an ounce (30 gm.) or 15 to 18 gm. carbohydrate. Usually 3 slices daily is the limit. Later, substitutions for fruit, cereal and bread may be made. In one case described, the patient was advised to eat meat, fish, eggs, cheese and butter moderately so that protein would be about 100 gm. and the fat 100 gm. Many do well on this schedule.

Insulin therapy of this patient consisted of 8 units of crystalline insulin and 12 of protamine zinc insulin and the next morning, 12 units of crystalline and 24 units of protamine zinc insulin. After five days of this treatment, a glycosuria and a blood sugar of 76 mg. caused a change to 8 units of crystalline and 18 of protamine zinc insulin. After two weeks, again the dosage was lowered, this time to 4 units of crystalline and 16 of protamine zinc insulin. Finally, crystalline insulin was omitted and only 12 units of protamine zinc insulin given.

In milder cases 8 units of protamine zinc insulin may be given at first and raised or lowered. The full effect of protamine zinc insulin does not appear until the third day.

Diabetes is controlled in general by diet and protamine zinc insulin. Crystalline insulin is added only when protamine zinc insulin rises to 20, 24 or 28 units. Above that, insulin reaction may occur in the night.

The two insulins are injected separately in this clinic. When the urine voided on rising or voided one-half hour later is not sugar-free, 4 units of protamine zinc insulin are added until the urine voided on rising is found sugar-free or until 20 to 28 units are injected. If glycosuria is found present then or after meals, crystalline insulin is added in 4-unit doses, finally reaching one-third to one-half that of protamine zinc insulin.

The causes of death during 1942-1943 among diabetics whose onset of disease occurred in childhood were varied. Of the 1,626 cases discussed, 5 deaths were caused by infections. It is not yet determined whether such infections can be prevented by daily doses of sulfadiazine, but it is known that "infections in diabetes must not be tolerat-

ed." Another cause is appendicitis, and appendectomy is indicated, and even prophylactic removal of the appendix sometimes seem advisable.

Diabetic coma no longer seems justifiable. Whenever death is due to this cause, in Joslin's clinic, determination is made whether glucose or alkali had been administered. Patients with diabetic coma are given insulin, as patients having sufficient insulin do not develop coma. A deficiency of blood sugar due to excess of insulin is treated with glucose to neutralize the insulin.

Four of this series reported died from nephritis. Four others with this serious complication are now being treated and all are blind. This is a serious complication in the young diabetic who disregards diet and calories and lives with the help of insulin. Joslin rarely finds nephritis in diabetics who control their disease with diet and insulin.

Reprinted from the *Quarterly Review of Medicine*, May, 1945.

#### GERMAN DOCTORS UNDER NAZISM

Shortly after V-E Day, Colonel Edward D. Churchill, Allied Mediterranean forces' surgical consultant, toured six German military hospital areas and reported his findings to American correspondents.

As we all know, American doctors' care of wounded in this war has been and continues phenomenal as regards its record-breaking percentages of cures and its development of new techniques and remedies. There was considerable expectation that the German doctors, what with German medicine's world-wide pre-Hitler fame and the well-known German thoroughness and energy, would have some pretty phenomenal achievements of their own to report from their war hospitals, once the Allies could crack into Fortress Europe and look around.

The Allies cracked in, all right; but Colonel Churchill did not find the phenomenal German medical achievements. His over-all conclusions after inspecting six German hospital areas was that German handling of wounded was about 20 years behind the American procedure.

Going into details, he reported that the German army doctors as a rule just casually passed up badly wounded men on the assumption that they were going to die anyway, whereas our doctors fight to the last gasp for every wounded man's life, and frequently win; that the German physicians never had realized the maximum possibilities of blood transfusion, and used antiquated apparatus for what transfusions they did give; that as for professional pride in pulling off near-miracles of cure or amelioration, such pride just was not in the bulk of German military physicians and surgeons. By and large, they were victims of an apathy and a lack of ambition which would enrage a typical American doctor.

This is a sad backslide from Germany's once

proud position as world leader in medicine and surgery. How did it happen? Are there any lessons in it for us?

It began to happen soon after Hitler saddled his brand of totalitarianism on Germany. It seems reasonable to conclude that it happened because Hitler saddled Nazi totalitarianism on Germany.

For one thing, in the Nazi philosophy, your race and politics mattered far more than your brains and talents. You might be a brilliant physician or surgeon or research scientist, but if you were a Jew or an anti-Nazi of any description, you had to get out of Germany if you could, or go to a concentration camp if you couldn't get out. Thus Hitler and his crew decimated German science. Their master-race convictions, too, led logically to such grisly previsions of scientific research as the use in some concentration camps of humans of "inferior" breed as guinea pigs for various laboratory experiments.

Ruled by the politicians and browbeaten by Nazi gangsters, German medicine—on the strength of Colonel Churchill's findings, at any rate—withered, and in due time the German armed forces paid, in the form of bigger death totals than they need have suffered.

The lesson in the German experience seems clear enough. It is that there is no substitute for a free, bold and inquisitive medical profession, or for generously financed and expertly staffed medical research, carried on year in and year out. It is devoutly to be hoped that the lesson of the German medical collapse will not be lost on us.

Courtesy of *Collier's*, the National Weekly.

#### THE JOB OF A CONSERVATIVE IN AN ERA OF CHANGE

At a time of tumultuous transition when all our social institutions are in process of rapid and profound change—when the only certain thing that can be said of the future is that it is uncertain—then the only tenable position for a conservative is to be a progressive. It is absurd to speak of maintaining the status quo when the status quo itself is in flux.

The job of the true conservative under such conditions is to defend as staunchly as he may whatever values or characteristics of the past he honestly believes to be essential to sound progress in the future; while at the same time lending a sympathetic ear to every new cause that seems to contain the promise of good things.

Any institution that fails to strike out boldly and swim with an overwhelming tide will find itself at the mercy of that swirling waters. Likewise, any group that seeks merely to hold back the irresistible currents of change and progress can only lose whatever influence it might have had upon the direction and destiny of the tides. Such a group, by abdicating its social responsibilities, will have isolated itself from society. It will surely lose the public confidence that is indispensable to its own existence as a social force.

The public looks to medicine for leadership in medical affairs. If medicine were now to treat the public to the spectacle of medical men leading in the evolution of the social-medical system of the future, rather than being somewhat reluctantly carried along with the tide, then the world would indeed be our apple. The pearl beyond price, is public confidence. Without public confidence we are lost. With it, the future will be ours to shape and to mould.

Reprinted from *New York Medicine* July 5, 1945.

### THE CLINICAL SIGNIFICANCE OF PALPABLE SPLEEN

WILLIAM F. LIPP, ELLEN H. ECKSTEIN and  
A. H. AARON

Department of Medicine, University of Buffalo,

The spleen in several thousand consecutive patients, most of them ambulatory, was observed for

several months to several years, with repeated examinations.

The spleen was palpable in 128 (5.6 per cent) of 2,274 patients, 68 males and 60 females, aged from 20 to 60 years. Enlargement of the spleen was found in 34 of the 128 (25.5 per cent). Thirteen patients had cholelithiasis, 8 of them without symptoms, and 15 were considered to have generalized viscerotaxis. Diseases of the liver are considered a cause of splenomegaly, and cholelithiasis may be associated with splenomegaly as the result of liver injury. In 41.4 per cent of the cases an exhaustive clinical search showed no adequate cause of the palpable spleen. However, the finding of a palpable spleen should always be recorded and may be of definite value in future studies of the patient.

Reprinted from the *Quarterly Review of Medicine*, May, 1945.

## ORGANIZATION SECTION

CHARLES P. AUSTIN, M. D., President

### Directory

#### ARIZONA STATE MEDICAL ASSOCIATION

Organized 1892

423 HEARD BUILDING, PHOENIX, ARIZONA

#### OFFICERS AND COUNCIL

|                                  |          |
|----------------------------------|----------|
| Charles P. Austin, M. D. (1949)  | Morenci  |
| President                        |          |
| George O. Bassett, M. D. (1950)  | Prescott |
| President-Elect                  |          |
| John W. Pennington, M. D. (1946) | Phoenix  |
| Vice-President                   |          |
| Frank J. Millay, M. D. (1946)    | Phoenix  |
| Secretary                        |          |
| C. E. Yount, M. D. (1946)        | Prescott |
| Treasurer                        |          |
| F. W. Butler, M. D. (1946)       | Safford  |
| Speaker of the House             |          |
| Jesse D. Hamer, M. D. (1946)     | Phoenix  |
| Delegate to A. M. A.             |          |
| D. F. Harbridge, M. D. (1945)    | Phoenix  |
| Chairman, Medical Defense        |          |
| District Councilors              |          |
| Robert S. Plinn, M. D. (1947)    | Phoenix  |
| Central District                 |          |
| A. C. Carlson, M. D. (1948)      | Jerome   |
| Northern District                |          |
| Hal W. Rice, M. D. (1948)        | Bisbee   |
| Southern District                |          |
| Councilors-at-Large              |          |
| Dan L. Mahoney, M. D. (1948)     | Tucson   |
| O. E. Utzinger, M. D. (1947)     | Ray      |
| E. Payne Palmer, M. D. (1946)    | Phoenix  |

#### COMMITTEES\*

##### Scientific

|  |
|--|
| Cancer Control—A. L. Lindberg (1947), Tucson; E. Payne Palmer (1948), Phoenix; M. G. Wright (1945), Winslow, and J. N. Stratton (1946), Safford.   |
| History and Obituaries—Hal W. Rice, Historian, Bisbee; Donald F. Hill, Tucson, Frank J. Millay, Phoenix.   |
| Industrial Health—John D. Hamer (1947), Tiger; Chas. B. Huettis (1948), Hayden; E. M. Hayden (1948), Tucson.   |
| Maternal and Child Health—L. C. McVay (1947), Phoenix; Howard C. James (1948), Tucson; W. P. Sherrill (1948), Phoenix.   |
| Orthopedics—Geo. L. Dixon (1947), Tucson; E. W. Adamson (1946), Douglas; James Lytton-Smith (1945), Phoenix.   |
| Scientific Assembly—Charles P. Austin President-elect and Chairman (1949); Morenci; Carl H. Gans (1947), Bisbee; G. F. Manning (1946), Flagstaff; R. W. Rudolph, Host Society (1945), Tucson; Frank J. Millay (1945), Phoenix. |

Scientific Education and Postgraduate Activities—A. H. Dosterhoff (1948), McNary; A. I. Podolsky (1947), Yuma; Florence B. Yount (1945), Prescott; Chas. S. Kibler (1945) Tucson.

Syphilis and Social Diseases—L. H. Howard (1947), Tucson; L. G. Jekel (1946), Phoenix; George O. Bassett, (1945), Prescott.

Tuberculosis Control—James H. Allen (1947), Prescott; Samuel H. Watson (1946), Tucson; E. W. Phillips (1945), Phoenix.

##### Non-Scientific

Auxiliary Advisory—Geo. R. Barfoot (1947), Phoenix; W. Claude Davis (1946), Tucson; Florence B. Yount (1945), Prescott.

Editing and Publishing—Jesse D. Hamer (1945), Chairman, Phoenix; A. L. Lindberg (1946), Tucson; Walter Brasie (1947), Kingman.

Industrial Relations—Meade Clyne, Tucson; James Lytton-Smith, Phoenix; A. C. Carlson, Jerome; O. E. Utzinger, Ray; John W. Pennington, Phoenix; C. E. Yount, Prescott; Frank J. Millay, Secretary to Committee.

Medical Defense—D. F. Harbridge, Chairman (1945), Phoenix; A. C. Carlson (1946), Jerome; John W. Pennington (1947), Phoenix.

Medical Economics—C. E. Patterson (1946), Tucson; Meade Clyne (1945), Tucson; Robert G. Plinn (1947), Phoenix.

Public Health Education—H. L. McMartin (1947), Phoenix; J. S. Gonzales (1946), Nogales; Paul H. Case (1945), Phoenix; Geo. O. Bassett (1945), Prescott.

Public Policy and Legislation—Charles A. Thomas (1947), Tucson; Walter Brasie (1946), Kingman; Jesse D. Hamer (1945), Phoenix.

State Health Relations—Louis G. Jekel, (1947) Phoenix; E. Henry Running (1946), Phoenix; Donald F. Hill (1945), Tucson.

\* Terms expiring in 1945 will hold until 1946.

## President's Message

### ACTIVITIES REPORT

In accordance with the action of the Council and the House at the Annual Meeting, April, 1945, the **PUBLIC HEALTH EDUCATION PROGRAM** for the season 1945-1946 is now under way. The executive bodies voted \$5,000 for such a program for a year, hoping to bring

to the public of this state the latest information on matters relating to their health. This was voted as a three way program: Radio, Press, Legislative. The following is the program under the three heads indicated:

**THE RADIO:** The radio programs were contracted on a yearly basis with programs of 15 minutes to be broadcasted weekly over KTAR of Phoenix. These programs, under the title, *THE MEDICAL QUARTER HOUR*, are now broadcast each Monday evening at 6:15 over KTAR, and each Friday evening at 9:15 over KVOA, Tucson. As funds permit other stations will be added. Beginning with September 17, the new fall series will go on the air under the title, "*GUARDIANS OF YOUR HEALTH*", the following being the program titles:

"DOCTORS GUARD YOUR HEALTH"

Haven Emerson, M. D., New York City, and others.

"HEALTH IN YOUR TOWN"

M. R. French, Paw Paw., Mich. and others.

"HEALTH IN YOUR STATE"

A. J. Chesley, M. D., St Paul, and others.

"GUARDING THE NATION'S BORDERS"

Thomas Parran, M. D., and others.

"HEALTH IN OUR HEMISPHERE,"

John A. Ferrell, M. D., New York, and others.

"HEALTH IN THE SCHOOLS"

Chas. C. Wilson, M. D., New York, and others.

"SANITATION AN UNFINISHED JOB"

H. G. Callison, M. D., South Carolina, and others.

"GUARDING THE FOOD FRONT"

Willard H. Wright, M. D., USPHS, and others.

"TRAINED PUBLIC HEALTH WORKERS"

Wm. P. Shepard, M. D., San Francisco, and others.

"THE PUBLIC HEALTH LABORATORY"

W. D. Stovall, M. D., Madison, and others.

"CONTROLLING CONTAGIOUS DISEASES"

Carl A. Wiltzbach, M. D., Cincinnati, and others.

"HEALTH CRUSADES"

Chas. E. Lyght, M. D., New York, and others.

"HEALTH EDUCATION"

Donald Armstrong, M. D., New York, and others.

Each of the radio programs is in the nature of an interview with from two or more physicians

participating, each an authority of national note in his or her respective field. The Radio programs take well over half of the funds allocated for public health education purposes.

**THE PRESS:** The press programs consist of articles under the caption, "*In the INTEREST of your HEALTH*". Mats were made of the line cuts and are supplied the various papers running the articles. Space is paid for and contracted on a yearly basis. In the majority of instances the articles are appearing bi-weekly or monthly for the present, some are weekly, however. It is the plan of the committee to cover as many health topics as possible rather than repeat the same articles in the press statewide. At the time of this writing the following papers have entered into contract—and have expressed their pleasure at having this feature: *The Arizona Silver Blade* (Miami), *Casa Grande Dispatch*, *Coolidge Examiner*, *Copper Era* (Greenlee County), *Florence Blade-Tribune*, *Graham County Guardian*, *Nogales Herald*, *Nogales International*, *Prescott Courier*, *Republic & Gazette* (Phoenix), *Tucson Newspapers, Inc.* (*Citizen & Star*), *Yuma Daily Sun*. The Phoenix and Tucson dailies carry the radio advertising rather than the health articles which may be added at a later date. Other pages will soon be added. Where two papers in a county are used both the radio programs and health articles will be featured with one paper carrying the health article and the other the radio ads. A more extensive press program will be carried on in those localities not reached by the radio programs to a satisfactory degree. The Press program is taking a good 'slice' of the appropriation for health education purposes. Watch your local papers for the articles and ads appearing on these health topics. At least one paper in each county will carry the health articles.

**LEGISLATION:** A minor part of the funds allocated is being used for legislative purposes as it has never been the practice of this Association to expend any appreciable funds for this purpose either directly or indirectly. The First Special Session of the Seventeenth Legislature convened on September 10. The Association program, conducted by the Committee on Public Policy and Legislation, consisted of the introduction of a bill—called the *Enabling Act for Medical Service*—setting up an act under which a medical plan may operate in this state. The only expense in connection with this Legislation

is the attorney's fee for advice on legal phases of the bill prepared in our Phoenix office in conjunction with the Arizona Blue Cross Service. The Association Committee 'carries the ball' through legislative ups and downs and has no lobbyist in any sense of the word. A Special Session of 20 days, as allowed by law, is a rather brief period for deliberation on such an important measure as the one proposed. However, every effort will be exerted to secure the passage of this *Enabling Act* so that a plan may get under way without a two year wait for a regular session of the Legislature. The Association Committee have had this *Enabling Act* in mind and before them for study for a year or more. After it was in shape and included the various protective features for the subscribers—the Act embracing the best features of such acts now in operation in other states—it was submitted to an attorney for legal soundness. A considerable research was necessary on the attorney's part to determine the soundness of the act. It is felt that we now have an *Enabling Act* second to none in the United States and sincere effort will be made by the Committee on Legislation to secure its immediate enactment. It is legislation any legislator should be proud to give his constituents.

#### OTHER ASSOCIATION ACTIVITIES

**SCIENTIFIC:** Now that travel and convention restrictions have been removed, the Annual Meeting for this coming spring may now include the usual scientific session. *The Committee on Scientific Assembly* will immediately go into this matter and set up an even 'bigger and better' program than we have had in the past. We were permitted to have no such program this past season due to rulings of the ODT. It has been the custom of the Association for several seasons past, through the Committee on Scientific Assembly, to invite a group of instructors from some prominent medical college to put on a complete scientific program during the Annual Meeting. That will probably be the procedure again this year as the membership have found these programs to be of postgraduate nature both in presentation and subject matter. The newest and latest in medical and surgical procedure has been brought to the membership in these lectures. All Arizona physicians have been tied down at home during the war, there being no time for them to take a few weeks off and attend national clinics for medical and

surgical refreshment. With physicians now gradually coming back from service, it may soon be possible for the physician who has put in strenuous hours on the home front to get away for awhile. Like the postman, the physician's usual holiday is one in line with his work and of study.

It is the hope of the Council that the Committee on Scientific Education and Post Graduate activities may now resume their former inter-county meetings with their helpful interchange of scientific programs.

**COUNTY SOCIETY PARTICIPATION:** It has been gratifying to have the immediate response from the county societies on the Association activities. The *Committee on Public Health Education*, for example, submitted their press program to the county societies for suggestions and criticisms with replies coming back by return mail in the majority of instances. On all committee activities the local societies have been most prompt in submitting their suggestions.

**MEMBERSHIP PARTICIPATION:** Mailings from the Central Office direct to the membership—such as the questionnaires relative to a Medical Service Plan—bring around a two-thirds response. This is considered good as a state-wide response, but it is hoped with YOUR PERSONAL ATTENTION AND INTEREST that this response may come up to the 100% bracket as a foregone conclusion.

**PUBLIC RESPONSE:** The public—statewide—is expressing its appreciation for the health education programs now in effect. Every mail brings response from some section of the state. The radio programs have brought many requests for additional information on the health topics discussed. To meet these requests, the Committee now has on hand at the central office numerous pamphlets on Whooping Cough, Heart Disease, The Common Cold, Undulant Fever, and others. These are free for the asking to those requesting the same. The Press is expressing its appreciation for the type of articles being published under the caption, "In the Interest of Your Health". Such comments as: "We believe your Association is performing a good service in discussing health matters through the press" are characteristic of those received.

**ADDITIONAL PUBLIC HEALTH EDUCATION FEATURES:** The Committee on Public

Health Education anticipates adding still other features to its yearly program as the year continues. Details for simple, yet practical, community health lectures—with simple exhibits—are now being worked out and will be presented to the county medical societies for their consideration in the near future. The various county medical societies would be responsible for putting on these programs in their own

communities with the Central Office assisting.

The association committees are conducting these programs; let us have your suggestions and opinions.

President

## MEMBERSHIP ROSTER, 1945

### *Arizona Medical Association*

| <b>APACHE COUNTY MEDICAL SOCIETY</b>   |                            | <b>MEMBERS IN SERVICE</b>              |
|--|----------------------------|--|
| Dysterheft, Arnold H.                  | Salsbury, C. G. (assoc.) * | Aarni, John                            |
| McNary                                 | Ganado                     | Hayden                                 |
| Herbst, Kenneth A.                     | Spining, W. D. (assoc.) *  | Gunter, Manning *                      |
| McNary                                 | Ganado                     | Globe                                  |
| * Associate Members                    |                            | * Killed in Action                     |
| <b>COCHISE COUNTY MEDICAL SOCIETY</b>  |                            | <b>GRAHAM COUNTY MEDICAL SOCIETY</b>   |
| Adamson, E. W.                         | Helm, Hugh M.              | Butler, F. W.                          |
| Douglas                                | Douglas                    | Safford                                |
| Allessi, N. V.                         | Hess, Geo. H.              | Langdon, G. W.                         |
| Douglas                                | Bisbee                     | Safford                                |
| Atonna, Guy B.                         | Hunt, Charles H.           |  |
| Douglas                                | Bisbee                     |  |
| Causey, Paul S.                        | Parrish, F. W.             | Condell, Lyle A.                       |
| 2801 St. Charles St.                   | Bowie                      | (deceased)                             |
| New Orleans, (15) La.                  | Rice, Hal W.               | Safford                                |
| Duncan, A. K.                          | Bisbee                     |  |
| Douglas                                | Shoun, A. N.               |  |
| Gain, Douglas D. *                     | Benson                     |  |
| 15 E. Monroe, Phoenix                  | Willcox                    |  |
| Gans, Carl H.                          | Zinn, P. P.                |  |
| Morenci                                | Bisbee                     |  |
| * Transferred to Maricopa              |                            |  |
| <b>MEMBERS IN SERVICE</b>              |                            | <b>GREENLEE COUNTY MEDICAL SOCIETY</b> |
| Bregman, E. H.                         | Piepergerdes, C. C.        | Austin, Charles P.                     |
| Tombstone                              | Bisbee                     | Morenci                                |
| Graham, Duncan G.                      | Saba, Joseph               | Laugharn, Chas. H.                     |
| Bisbee                                 | Bisbee                     | Clifton                                |
| Montgomery, R. E.                      | Walsh, James S.            |  |
| Douglas                                | Douglas                    |  |
| Nugent, A. G.                          |                            |  |
| Douglas                                |                            |  |
| <b>COCONINO COUNTY MEDICAL SOCIETY</b> |                            | <b>MEMBERS IN SERVICE</b>              |
| Fronske, M. G.                         | Raymond, R. O.             | Fife, Karl L.                          |
| Flagstaff                              | Flagstaff                  | Duncan                                 |
| Manning, G. F.                         | Scott, A. R.               |  |
| Supt. State Dept.                      | Flagstaff                  |  |
| Health, Phoenix                        | Sechrist, Chas. W.         |  |
|  | Flagstaff                  |  |
| <b>MEMBERS IN SERVICE</b>              |                            | <b>MARICOPA COUNTY MEDICAL SOCIETY</b> |
| Barnes, H. A.                          | Hein, Walter F.            | Adams, Mabel India                     |
| Flagstaff                              | Williams                   | 1110 N. 25th St.                       |
| Creighton, Carol C.                    | Kittredge, D. W.           | Phoenix                                |
| Flagstaff                              | Flagstaff                  | Armbruster, A. C.                      |
|  |                            | 234 N. Central Ave.                    |
|  |                            | Phoenix                                |
|  |                            | Armour, Paul                           |
|  |                            | 112 S. 12th Ave.                       |
|  |                            | Phoenix                                |
|  |                            | Baier, Frederic D.                     |
|  |                            | 137 N. 2nd Ave.                        |
|  |                            | Phoenix                                |
|  |                            | Bakes, Edwin C.                        |
|  |                            | 15 E. Monroe                           |
|  |                            | Phoenix                                |
|  |                            | Baldwin, Louis B.                      |
|  |                            | 15 E. Monroe                           |
|  |                            | Phoenix                                |
|  |                            | Barfoot, Geo. R.                       |
|  |                            | 15 E. Monroe                           |
|  |                            | Phoenix                                |
|  |                            | Barker, Clyde J. sr.                   |
|  |                            | 15 E. Monroe                           |
|  |                            | Phoenix                                |
|  |                            | Beauchamp, H. K.                       |
|  |                            | (deceased)                             |
|  |                            | Phoenix                                |
|  |                            | Beck, L. D.                            |
|  |                            | 7 W. McDowell Rd.                      |
|  |                            | Phoenix                                |
|  |                            | Bloomhardt, S. I.                      |
|  |                            | 15 E. Monroe                           |
|  |                            | Phoenix                                |
|  |                            | Case, Paul H.                          |
|  |                            | 15 E. Monroe                           |
|  |                            | Phoenix                                |
|  |                            | Charvoz, Elton R.                      |
|  |                            | 15 E. Monroe                           |
|  |                            | Phoenix                                |
|  |                            | Clohessey, T. T.                       |
|  |                            | 15 E. Monroe                           |
|  |                            | Phoenix                                |
|  |                            | Cohen, Matthew                         |
|  |                            | 15 E. Monroe                           |
|  |                            | Phoenix                                |
|  |                            | Conner, S. K.                          |
|  |                            | 926 E. McDowell                        |
|  |                            | Phoenix                                |

**MARICOPA COUNTY—(Continued)**

|                      |                       |                     |                           |
|----------------------|-----------------------|---------------------|---------------------------|
| Cruthirds, Archie E. | Gudgel, Harry B.      | McKeown, H. J.      | Reese, Forrest L.         |
| 15 E. Monroe         | 15 E. Monroe          | 926 E. McDowell     | 15 E. Monroe              |
| Phoenix              | Phoenix               | Phoenix             | Phoenix                   |
| Dagres, Lucille M.   | Hagan, John L.        | McKhann, Geo. G.    | Robb, Mayo                |
| 15 E. Monroe         | 2603 N. Central Ave.  | 15 E. Monroe        | 15 E. Monroe              |
| Phoenix              | Phoenix               | Phoenix             | Phoenix                   |
| Day, M. L.           | Hamer, Jesse D.       | McMartin, H. L.     | Rogers, George K.         |
| 926 E. McDowell      | 15 E. Monroe          | 1206 W. Madison     | 926 E. McDowell           |
| Phoenix              | Phoenix               | Phoenix             | Phoenix                   |
| Denninger, Henri S.  | Harbridge, D. F.      | McVay, L. Clark     | Rosenquist, R. Winfield   |
| Glendale             | 15 E. Monroe          | 15 E. Monroe        | 25 W. 8th Street          |
| Dirks, Maitland S.   | Phoenix               | Phoenix             | Tempe                     |
| 425 N. 4th St.       | Harris, Karl S.       | Meason, J. M.       | Rosenthal, Maurice        |
| Phoenix              | 15 E. Monroe          | Chandler            | 1033 E. McDowell          |
| Drane, James E.      | Phoenix               | Medigovich, D. V.   | Phoenix                   |
| 112 N. Central Ave.  | Hartgraves, T. A.     | 15 E. Monroe        | Ross, Norman A.           |
| Phoenix              | 926 E. McDowell       | Phoenix             | 15 E. Monroe              |
| Edel, Frank W.       | Phoenix               | Melton, B. L.       | Phoenix                   |
| 15 E. Monroe         | Hartman, Stanford     | 15 E. Monroe        | Running, E. Henry         |
| Phoenix              | 926 E. McDowell       | Phoenix             | 15 E. Monroe              |
| Enfield, Geo. S.     | Phoenix               | Milloy, Frank J.    | Phoenix                   |
| 15 E. Monroe         | Hernandez, R. A.      | 15 E. Monroe        | 109 Sunland Ave.          |
| Phoenix              | 240 E. Madison        | Phoenix             | Buckeye                   |
| Fahlen, F. T.        | Phoenix               | Mills, Harlan P.    | Running, E. Henry         |
| 112 N. Central Ave.  | Hilton, Robt. K.      | Phoenix (deceased)  | 15 E. Monroe              |
| Phoenix              | Litchfield Park       | Moore, Jas. R.      | Phoenix                   |
| Felch, Harry J.      | Holmes, Fred G.       | 15 E. Monroe        | Ryerson, Paul M.          |
| 15 E. Monroe         | 15 E. Monroe          | Phoenix             | 1505 E. McDowell          |
| Phoenix              | Phoenix               | Moran, Tressa R.    | Phoenix                   |
| Flinn, Robt. S.      | Irvine, Geo. B.       | 425 N. 4th Street   | Saxe, Louis J.            |
| 15 E. Monroe         | Tempe                 | Phoenix             | 717 W. Palm Lane          |
| Phoenix              | Jekel, Louis G.       | Ohl, Howard J.      | Phoenix                   |
| Flohr, Martin C.     | 15 E. Monroe          | 15 E. Monroe        | Schoffman, Wm. F.         |
| Tolleson             | Phoenix               | Phoenix             | 926 E. McDowell           |
| Forster, Wesley G.   | Johnson, James L.     | Ovens, James M.     | Phoenix                   |
| 926 E. McDowell      | 15 E. Monroe          | 926 E. McDowell     | Sharp, Floyd B.           |
| Phoenix              | Phoenix               | Phoenix             | 15 E. Monroe              |
| Foster, R. Lee       | Johnson, Philip L.    | Palmer, Charles B.  | Phoenix                   |
| 15 E. Monroe         | 1102 N. Central Ave.  | 125 W. Monroe       | Sharp, W. S. (deceased)   |
| Phoenix              | Phoenix               | Phoenix             | Mesa                      |
| Fountain, Wayne      | Jordan, Fred C. *     | Palmer, E. Payne    | Shelley, A. A. (deceased) |
| 11 W. Jefferson      | (deceased)            | 5 E. Monroe         | Phoenix                   |
| Phoenix              | 15 E. Monroe          | Phoenix             | Shembab, Cecilia          |
| Fournier, Dudley T.  | Kent, Melvin Lloyd    | Palmer, Ralph F.    | 1117 W. Jefferson         |
| 15 E. Monroe         | Mesa                  | 15 E. Monroe        | Phoenix                   |
| Phoenix              | Kilgard, Frank M.     | Phoenix             | Sherrill, W. P.           |
| Franklin, Henry L.   | 125 W. Monroe         | Park, J. Minor      | 324 W. McDowell           |
| 15 E. Monroe         | Phoenix               | 505 W. McDowell     | Phoenix                   |
| Phoenix              | Kingsley, A. C.       | Phoenix             | Snyder, Bertram L.        |
| Frissell, Ben Pat    | 15 E. Monroe          | Patterson, John H.  | 15 E. Monroe              |
| 15 E. Monroe         | Phoenix               | 234 N. Central Ave. | Phoenix                   |
| Phoenix              | Kroeger, Hilda H.     | Phoenix             | Stevens, Robt. H.         |
| Frost, Thos. T.      | State Dept. Health    | Patterson, W. B.    | 15 E. Monroe              |
| 15 E. Monroe         | Phoenix               | Mesa                | Phoenix                   |
| Phoenix              | Leff, M. I.           | Penn, R. L.         | Stroud, R. J.             |
| Furth, William Guy   | Glendale              | Avondale            | 702½ Mill Ave.            |
| 11 W. Jefferson      | Little, Stillman D.   | Pennington, John W. | Tempe                     |
| Phoenix              | 15 E. Monroe          | 15 E. Monroe        | Sult, Charles W.          |
| Gain, Douglas D.     | Phoenix               | Phoenix             | 15 E. Monroe              |
| 15 E. Monroe         | Love, Layton A.       | Phillips, Earle W.  | Phoenix                   |
| Phoenix              | 184 Los Robles Ave.   | 15 E. Monroe        | Toiland, Virgil A.        |
| Garrison, I. L.      | Litchfield Park-Subd. | Phoenix             | 15 E. Monroe              |
| 540 W. McKinley      | Lyttom-Smith, James   | Phillips, Robt. T.  | Phoenix                   |
| Phoenix              | 926 E. McDowell       | 15 E. Monroe        | Tucker, J. B.             |
| Gaskins, Duke R.     | Phoenix               | Phoenix             | 14 N. Central Ave.        |
| 15 E. Monroe         | Matanovich, M.        | Pohle, Ernest E.    | Phoenix                   |
| Phoenix              | 15 E. Monroe          | Tempe               | Tuthill, Alexander M.     |
| Gatterdam, E. A.     | Phoenix               | Randolph, Howell S. | 15 E. Monroe              |
| 15 E. Monroe         | McCracken, Paul       | 15 E. Monroe        | Phoenix                   |
| Phoenix              | 1206 W. Madison       | Phoenix             | Vernetti, Lucy            |
| Gibbes, Helen S.     | Phoenix               | Randolph, Victor S. | 15 E. Monroe              |
| 2233 N. Alvarado     | McIntyre, A. J.       | 15 E. Monroe        | Phoenix                   |
| Phoenix              | 11 W. Jefferson       | Phoenix             | Ward, R. Leslie           |
| Gilbert, K. M.       | Phoenix               |                     | Buckeye                   |
| Chandler             |                       |                     |                           |

**MARICOPA COUNTY—(Continued)**

|                                       |                            |
|---------------------------------------|----------------------------|
| Watkins, W. Warner                    | Williamson, Geo. A.        |
| 15 E. Monroe                          | 15 E. Monroe               |
| Phoenix                               | Phoenix                    |
| West, O. C.                           | Wills, E. C.               |
| 14 N. Central Ave.                    | 11 West Jefferson          |
| Phoenix                               | Phoenix                    |
| Whiting, Spencer D.                   | Woern, Wm. H.              |
| 11 W. Jefferson                       | 15 E. Monroe               |
| Phoenix                               | Phoenix                    |
| <hr/> <b>MEMBERS IN SERVICE</b> <hr/> |                            |
| Armbuster, A. Carl                    | Palmer, E. Payne, Jr.      |
| Phoenix                               | Phoenix                    |
| Bank, Joseph                          | Palmer, Paul V.            |
| Phoenix                               | Phoenix                    |
| Barker, Clyde J. Jr.                  | Peterson, Kenneth E.       |
| Phoenix                               | Phoenix                    |
| Bate, Thomas H.                       | Pohl, von, C. L.           |
| Phoenix                               | Chandler                   |
| Bendheim, O. L.                       | Polson, Donald A.          |
| Phoenix                               | Phoenix                    |
| Borah, Charles E.*                    | Porter, Dwight H.          |
| Phoenix                               | Phoenix                    |
| Brown, Preston T.                     | Purcell, H. M.             |
| Phoenix                               | Phoenix                    |
| Condon, D. J.                         | Rice, A. G.                |
| Phoenix                               | Chandler                   |
| Craig, Carlos C.                      | Rice, Philip E.            |
| Phoenix                               | Glendale                   |
| Davis, Robt. L.                       | Schnabel, G. P.            |
| Phoenix                               | Phoenix                    |
| DePinto, Angus J.                     | Shup, Reel *               |
| Phoenix                               | Phoenix                    |
| Fillmore, A. J.*                      | Smith, Leslie B.           |
| Mesa                                  | Phoenix                    |
| Greer, Joseph M.                      | Smith, W. Jewell           |
| Phoenix                               | Phoenix                    |
| Haines, R. S.                         | Stump, Robert M.           |
| Phoenix                               | Phoenix                    |
| Hall, Norman D.                       | Sult, Charles W. Jr.       |
| Phoenix                               | Phoenix                    |
| Herzberg, Benjamin                    | Swasey, Lloyd K.           |
| Phoenix                               | Phoenix                    |
| Huriak, Z. A.*                        | Tanaka, Paul               |
| Phoenix                               | Phoenix                    |
| Hussong, R. W.                        | Thayer, Kent H.            |
| Phoenix                               | Phoenix                    |
| Jeffery, V. J.                        | Thoeny, Oscar W.           |
| Buckeye                               | Phoenix                    |
| Ketcherside, H. D.                    | Thomas, John Wix           |
| Phoenix                               | Phoenix                    |
| Kober, Leslie R.                      | Truman, George C.          |
| Phoenix                               | Mesa                       |
| Lentz, Joseph S.                      | Tuveson, L. L.             |
| Phoenix                               | Phoenix                    |
| Lufty, Louis P.                       | Van Epps, C. E.            |
| Phoenix                               | Phoenix                    |
| Merrill, M. W.*                       | Warrenburg, C. B.          |
| Phoenix                               | Phoenix                    |
| Mills, C. Selby                       | Williams, O. O.            |
| Phoenix                               | Phoenix                    |
| Neff, Bayard L.                       | Woodman, Thomas W.         |
| Mesa                                  | Phoenix                    |
| * Returned to Practice                |                            |
| <b>MOHAVE COUNTY MEDICAL SOCIETY</b>  |                            |
| Brazie, Walter                        | White, Toler R. (deceased) |
| Kingman                               | Kingman                    |
| <hr/> <b>MEMBERS IN SERVICE</b> <hr/> |                            |
| Koehn, Carl L.                        | Orlando, Wm. F.            |
| Goldroad                              | Kingman                    |
| <b>NAVAJO COUNTY MEDICAL SOCIETY</b>  |                            |
| Heywood, Bernard                      | Sprankle, Paul D.          |
| Holbrook                              | Winslow                    |
| Johnson, Wm. Andrew                   | Wright, M. G.              |
| Winslow                               | Winslow                    |
| Morton, Wm. G.                        |                            |
| Winslow                               |                            |

**PIMA COUNTY MEDICAL SOCIETY**

|                     |                      |
|---------------------|----------------------|
| Allen, F. W.        | Flood, Clyde E.      |
| 20 E. Ochoa         | 110 S. Scott         |
| Tucson              | Tucson               |
| Arntzen, J. L.      | Gault, Wm. H.        |
| 516 E. Third St.    | 110 S. Scott         |
| Tucson              | Tucson               |
| Atwood, H. J.       | Gore, V. M.          |
| Ajo                 | 123 S. Stone         |
| Benesma, C. E.      | Tucson               |
| 1800 E. Speedway    | Gotthelf, Ed J.      |
| Tucson              | 4 E. Congress        |
| Bernfeld, Michael   | Tucson               |
| 123 S. Stone        | Grauman, S. J.       |
| Tucson              | 4 E. Congress        |
| Biddle, Dale        | Tucson               |
| 123 S. Stone        | Gregg, Fred C.       |
| Tucson              | 123 S. Stone         |
| Bigglestone, H. C.  | Tucson               |
| 23 E. Ochoa         | Gungle, E. J.        |
| Tucson              | Marana               |
| Bledsoe, Nelson C.  | Hartman, Geo. O.     |
| 1811 E. Speedway    | 115 S. Stone         |
| Tucson              | Tucson               |
| Bloom, Benson       | Hausmann, R. K.      |
| 4 E. Congress       | 110 S. Scott         |
| Tucson              | Tucson               |
| Bonnell, H. G.      | Hayden, Edward M.    |
| 416 N. Park Ave.    | 115 S. Stone         |
| Tucson              | Tucson               |
| Brady, Thos. A.     | Hayhurst, Darrell E. |
| 650 S. Country Club | 1717 E. Speedway     |
| Tucson              | Tucson               |
| Brown, Earl H.      | Hill, Donald F.      |
| 130 S. Scott        | 4 E. Congress        |
| Tucson              | Tucson               |
| Carrada, Luis N.    | Howard, Lewis H.     |
| 175 E. 12th Street  | Court House, Health  |
| Tucson              | Unit - Tucson        |
| Cates, Thos. H.     | Huffman, Ira E.      |
| 129 S. Scott        | 521 E. 3rd Street    |
| Tucson              | Tucson               |
| Closson, Esther M.  | James, H. C.         |
| 4 E. Congress       | 4 E. Congress        |
| Tucson              | Tucson               |
| Clyne, Meade        | Kibler, Chas. S.     |
| 110 S. Scott        | 110 S. Scott         |
| Tucson              | Tucson               |
| Cobb, Virginia M.   | Kroeger, C. R.       |
| 4 E. Congress       | 116 W. Alameda       |
| Tucson              | Tucson               |
| Cohen, Morris D.    | Laidlaw, Elizabeth   |
| 1534 E. Speedway    | 4 E. Congress        |
| Tucson              | Tucson               |
| Davis, W. Claude    | Lamb, H. L.          |
| 33 E. Broadway      | P. O. Box 1749       |
| Tucson              | Tucson               |
| Dixon, Geo. L.      | Lee, Joseph G.       |
| 2716 E. 4th St.     | Tucson               |
| Tucson              | 2629 E. 8th          |
| Donahue, John L.    | Lieberman, A. L.     |
| 4 E. Congress       | 4 E. Congress        |
| Tucson              | Tucson               |
| Dryer, Ralph G.     | Lindberg, A. L.      |
| 130 S. Scott        | 23 E. Ochoa          |
| Tucson              | Tucson               |
| Edwards, B. B.      | Lyon, Wm. R.         |
| 521 E. 3rd Street   | 316 E. Speedway      |
| Tucson              | Tucson               |
| Faris, Hervey S.    | Mahoney, Dan L.      |
| 115 S. Stone        | 4 E. Congress        |
| Tucson              | Tucson               |
| Fitzgerald, G. H.   | Mahoney, Vernon L.   |
| 1811 E. Speedway    | 614 N. 4th Ave.      |
| Tucson              | Tucson               |

**PIMA COUNTY—(Continued)**

Mills, Chas. W., (dec'd) 123 S. Stone Tucson  
Nagoda, Ed J. 4 E. Congress Tucson  
Oatway, W. H. Jr. 123 S. Stone Tucson  
Omer, Joy A. 4 E. Congress Tucson  
Patterson, C. E. 123 S. Stone Tucson  
Presson, Virgil G. 130 S. Scott Tucson  
Purcell, Geo. W. 109 S. Scott Tucson  
Rudolph, Royal W. 4 E. Congress Tucson  
Schultz, Wm. M. 110 S. Scott Tucson  
Schuster, B. L. 22 S. Warren Ave. Tucson  
Schutzbank, F. B. 4609 E. Cooper St. Tucson  
Semoff, Milton 2440 E. 6th St. Tucson  
Smelker, V. H. 4 E. Congress Tucson  
Smith, R. K. 4 E. Congress Tucson  
Starns, Charles E. 1616 E. 6th St. Tucson

**MEMBERS IN SERVICE**

Brainard, H. H. Tucson  
Callander, R. J. Tucson  
Carrell, W. D. Tucson  
Engelder, A. E. Tucson  
Farness, O. J. Tucson  
Hastings, R. E. Tucson  
Hewitt, W. R. Tucson  
Hicks, R. A. Tucson  
Holbrook, W. Paul Tucson  
Kirmse, Alvin Tucson  
Kitt, W. Stanley Tucson  
Kohl, Harold W. Tucson  
Lewis, Donald B. Tucson

Tappan, Vivian San Clemente Addn.  
Tucson  
Thomas, Chas. A. 130 S. Scott Tucson  
Thomas, N. K. 130 S. Scott Tucson  
Thompson, A. B. 168 W. Broadway Tucson  
Townsend, S. D. 311 E. Congress Tucson  
Watkins, Evelyn G. 4 E. Congress Tucson  
Watson, Samuel H. 110 S. Scott Tucson  
Webster, Clara S. 4 E. Congress Tucson  
Welton, P. C. 1040 N. Park Ave. Tucson  
Whittle, C. C. 130 S. Scott Tucson  
Williams, Marguerite 4 E. Congress Tucson  
Wilson, R. A. 130 S. Scott Tucson  
Witzberger, C. M. 614 N. 4th Ave. Tucson  
Woodard, J. H. 4 E. Congress Tucson  
Wyatt, B. L. 1800 E. Speedway Tucson  
Zemsky, Boris 4 E. Congress Tucson

**Storts, B. P.**

Tucson  
Thompson, Hugh C., Jr. Tucson

**Thompson, H. E.**

Tucson  
Ure, W. G. Tucson

**PINAL COUNTY MEDICAL SOCIETY**

Hamer, John D. Tiger  
Jackson, William Coolidge  
Lehmburg, H. B. Casa Grande  
Maxwell, G. E. Coolidge  
Nevins, C. R. Casa Grande

**MEMBERS IN SERVICE**

O'Neill, J. T. Coolidge  
Steward, B. L. Florence

**SANTA CRUZ COUNTY MEDICAL SOCIETY**

Bryant, James H. Patagonia  
Chapman, G. William Los Mochis, Sonora Mexico  
Fitts, T. B. Nogales  
Gonzalez, J. S. Nogales  
Harker, G. L. Nogales

**MEMBERS IN SERVICE**

Noon, Z. B. Nogales

**YAVAPAI COUNTY MEDICAL SOCIETY**

Allen, Jas. H. Prescott  
Bassett, George O. Prescott  
Carlson, Arthur C. Cottonwood  
Connor, John W. Seligman  
Fahy, John E. (assoc.)\* Whipple  
Hough, H. A. Prescott  
Looney, R. N. Prescott

\* Associate Members

**MEMBERS IN SERVICE**

Born, E. A. Prescott  
Jolley, E. B. Clarkdale  
McNally, Jos. P. Prescott

**YUMA COUNTY MEDICAL SOCIETY**

Cain, William C. Yuma  
Corliss, Philip G. Somerton  
Fenderson, Wayne A. Yuma  
Knotts, R. R. Yuma

**MEMBERS IN SERVICE**

Gwynn, Frank W. Yuma  
Kimball, Albert, P. Yuma  
Kimbrell, Robt. M. Yuma

An associate member is one not licensed to practice in the state but who is engaged in Veteran's Administration, Indian Service, and the like.

## Woman's Auxiliary

### STATE AUXILIARY OFFICERS AND COMMITTEE CHAIRMEN

#### OFFICERS 1945-46

|                         |  |
|-------------------------|--|
| PRESIDENT               | Mrs. Paul Henry Case, Phoenix  |
| PRESIDENT-ELECT         | Mrs. Hervey Paris, Tucson  |
| FIRST VICE-PRESIDENT    | Mrs. Royal Rudolph, Tucson   |
| SECOND VICE-PRESIDENT   | Mrs. Joy A. Omer, Tucson   |
| RECORDING SECRETARY     | Mrs. James R. Moore, Phoenix   |
| CORRESPONDING SECRETARY | Mrs. Louis G. Jekel, Phoenix   |
| TREASURER               | Mrs. E. Henry Running, Phoenix   |
| DIRECTORS:              | Mrs. Harlan P. Mills, Phoenix<br>121 West Granada Road<br>Mrs. Edward M. Hayden, Tucson<br>314 Country Club Drive<br>Mrs. James H. Allen, Prescott<br>829 Crest Ave. |
| Cancer Project          | Mrs. Raymond F. Oyler, Tucson  |
| Legislation             | El Encanto Apt. No. 54   |
| Public Relations        | Mrs. C. E. Patterson, Tucson   |
| Publicity               | 3 Paseo Redondo  |
| Bulletin                | Mrs. George L. Dixon, Tucson   |
| Hygeia                  | 2716 East Fourth Street  |
| Historian               | Mrs. T. A. Hartgraves, Phoenix   |
| War Service             | 54 West Holly  |
| ADVISORY BOARD:         | Mrs. L. Clark McVay, Phoenix<br>1106 West Portland   |
|                         | Mrs. Ludwig Lindberg, Tucson<br>1916 E. 5th Street   |
|                         | Mrs. Dudley Fournier, Phoenix<br>1619 Palmcroft Drive  |
|                         | Dr. G. Robert Barfoot<br>Dr. W. Claude Davis<br>Dr. Florence Yount   |

(Mrs. T. A. Hartgraves, State Publicity Chairman)

### THE WOMAN'S AUXILIARY TO THE MARICOPA COUNTY MEDICAL SOCIETY

Mrs. William F. Schoffman, President of the Maricopa County Auxiliary announced at a Board Meeting that a year book for Maricopa County was in the making and that the by-laws are being revised for this group.

The activities for the year will be to continue the Snack Bar for Service men each Wednesday: aid in the Cancer Control program: aid the Red Cross in making of afghan squares: the making of scrap books for local hospitals. The juvenile delinquency program as outlined by National will be carried out as it can be fitted into our local program.

#### OFFICERS

|                         |                                    |
|-------------------------|------------------------------------|
| PRESIDENT               | Mrs. William F. Schoffman, Phoenix |
| FIRST VICE-PRESIDENT    | 36 North Country Club Drive        |
| SECOND VICE-PRESIDENT   | Mrs. G. Robert Barfoot, Phoenix    |
| RECORDING SECRETARY     | 51 Cambridge                       |
| CORRESPONDING SECRETARY | Mrs. Charles W. Sult, Phoenix      |
|                         | 917 N. Fourth Street               |
|                         | Mrs. Karl S. Harris, Phoenix       |
|                         | 16 E. Catalina Dr.                 |
|                         | Mrs. Robert T. Phillips, Phoenix   |
|                         | 821 W. Holly                       |

### COMMITTEE CHAIRMAN

|                   |  |  |
|-------------------|--|--|
| Bulletin:         | Mrs. L. Clark McVay<br>2014 N. Central Ave.,<br>Phoenix, Arizona | Legislation and<br>Parliamentarian                           |
| Cancer:           | Mrs. R. Lee Foster<br>2215 N 11th Ave.,<br>Phoenix, Arizona      | Mrs. Jess D. Hamer<br>1819 N. 11th Ave.,<br>Phoenix, Arizona |
| Historian:        | Mrs. Kent Thayer<br>340 E. Montie Vista Rd.,<br>Phoenix, Arizona | Publicity:   |
| Hostesses:        | Mrs. George B. Irvine<br>1100 Mill Ave.,<br>Tempe, Arizona       | Mrs. Matthew Cohen<br>934 W. Palm Lane,<br>Phoenix, Arizona  |
| Hygeia:           | Mrs. E. Henry Running<br>321 W. Palm Lane,<br>Phoenix, Arizona   | Public Relations:  |
| War Service:      | Mrs. George Enfield<br>335 W. Cambridge,<br>Phoenix, Arizona     | Mrs. Palmer Dysart<br>1138 W. Culver,<br>Phoenix, Arizona    |
| DIRECTORS:        | Mrs. Paul H. Case<br>Rt. 2 Box 216 C                             | Revisions:   |
|                   | Mrs. Louis G. Jekel<br>Rt. 2 Box 216 D                           | Mrs. James R. Moore<br>305 W. Granada,<br>Phoenix, Arizona   |
| ADVISORY COUNCIL: | James R. Moore, M.D.<br>G. Robert Barfoot<br>Robert T. Phillips  | Telephone:   |

## MEDICO - LEGAL SECTION

### IN THE SUPREME COURT OF THE STATE OF ARIZONA

#### WORKMANS COMPENSATION

Liability of corporate employer for warehouse employee who lost an eye, while on duty when a bottle of Cola exploded.

#### MORGAN, J.:

Respondent Laws was employed by the petitioner as a guard at one of its warehouses in Phoenix. His hours of employment were from 3 p. m. to 11 p. m., with no time off for lunch. His instructions were to bring his lunch and eat it on the premises. He was credited with 8½ hours per day, the additional half hour being allowed which would ordinarily have been consumed if he had eaten off the premises. He had been in the employ of the petitioner for nine months.

On August 24, 1944, Laws drove to the warehouse shortly before 3 o'clock. He left his lunch, including a bottle of Royal Crown Cola, on the seat of the car parked near the door of the warehouse. At 3 p. m. he relieved the guard who worked on the prior shift. At about the hour of 3:35 p. m. he stepped out to his automobile, returned with his lunch and the bottle of Cola. About two months before the company had furnished a water cooler for drinking purposes. The cooler consisted of a 25 gallon galvanized garbage can equipped with a faucet. It was mounted on a barrel, the top being about 4 feet 8 inches above the floor. It was filled with ice and some water twice a day, and maintained for drinking purposes. It was the custom of Laws and other employees to cool bottles of beverages, such as Cola, which they had brought for their lunch or consumed on the job, upon the ice in this cooler. No rules or relaxations

existed against this practice. No other cooler facilities existed. In pursuance of this custom, Laws first washed off the bottle at a water faucet, raised the cooler lid to place the bottle of Cola on the ice. Before the bottle came in contact with the can or ice, and at a point opposite applicant's face—probably just over the cooler rim—the bottle exploded cutting his eye and hand, the injury resulting in the loss of the sight of one eye.

Claim for accident benefits under the workmen's compensation law was filed by the employee with the respondent Industrial Commission, the insurance carrier. Hearing was had, and on November 6, 1944, the commission made findings of facts substantially as above set forth, and further to the effect that (1) Laws sustained an injury by accident arising out of and in the course of his employment; (2) that the personal injury entitled him to accident benefits. Petitioner's protest and application for rehearing were seasonably filed and, being denied, brought the case to this court for review by the

There is no controversy as to the facts. The statutory certiorari proceedings, assignment and propositions of the petitioner raise two questions. First the injury suffered by respondent Laws was not in the course of his employment; second, the accident did not arise out of his employment. The petitioner and both respondents have presented the case with great zeal and marked ability. The briefs and arguments have been both lucid and comprehensive. The industry of counsel has failed to uncover an exactly parallel case. We take it that none exists.

The facts being admitted, the sole question for our determination is one of law. Did the conceded fact under the law authorize the commission to make the award? True, the commission made a finding that the accident arose out of and in the course of the applicant's employment. If there was any controversy as to the facts, such a finding would have to be considered as one of fact. Since, however, there is no issue as to the facts, and the situation is one from which differences may be drawn, the finding constitutes in effect a conclusion of law. To determine whether the conclusion is justified will require a consideration of the statutes, a review of the decisions of this court construing the act, and an examination of the authorities generally as to when an accident arises out of and in the course of employment.

The purpose and intent of the law must be given effect, but due regard must also be had as to the respective rights of employer and employee. A burden or liability not within the terms or spirit of the law is not to be imposed upon industry. On the other hand, the act must be construed liberally to effect its purposes and to provide compensation for workers who suffer injury from accidents arising out of and in the course of their employment. No

rule is to be adopted and applied which will make ineffectual the evident purpose of the law that those covered by the act who are injured while engaged in industrial work are to be compensated. When a machine is broken it must be repaired. When an appliance is worn out it must get renewed. When, through accident arising out of the course of his employment, a worker is injured, he should be allowed due compensation, and the cost for such compensation is charged against industry to the same extent as repair to a broken machine.

Article 18, section 8 of the Constitution of Arizona directed the legislature to enact a workmen's compensation law requiring compensation to be paid workmen in case of injury from specific accidents arising out of and in the course of such employment. The constitutional provision provided that such compensation should be paid where the accident "is caused in whole or in part, or is contributed to, by a necessary risk or danger of such employment."

Pursuant to that mandate, the legislature has enacted what is generally referred to as the workmen's compensation law, now appearing as sections 56-901 to 56-977, inclusive, A.C.A. 1939.

Section 56-931 provides that when an employee is injured by accident arising out of and in the course of his employment . . . unless purposely self-inflicted, shall be entitled to receive, and shall be paid compensation for loss sustained on account of such injury . . . ."

Again, in section 56-936, the following appears:

"Every employee covered by insurance . . . who is injured, by accident arising out of and in the course of employment . . . provided, the same are not purposely self-inflicted, shall be paid such compensation . . . for loss sustained on account of such injury, . . . ."

In section 56-930 it is provided that personal injury by accident arising out of and in the course of employment includes injury caused by the willful act of a third person directed against an employee because of his employment.

From the foregoing it will be seen that where an employee is injured by an accident arising out of and in the course of his employment he is entitled to compensation. He cannot be denied recovery unless his injury is purposely self-inflicted. His negligence or lack of care is no defense. Furthermore, the accident, if as defined in the constitution, need not arise wholly out of and in the course of employment. Recovery can be had if the accident "is caused in whole, or in part, or is contributed to, by a necessary risk or danger of such employment." No exception is made where injury or death is caused by an act of God.

This court on numerous occasions has construed the law and announced certain rules pertaining to what accidents come within the

terms of the act. The first decision, *Ocean Acc. & Guar. Corp. v. Ind. Com.*, 32 Ariz. 265, 257 Pac. 641, has been widely cited, and has been particularly called to our attention by all of the parties in this action. We quote as follows:

" . . . it is indispensable that the injury should both arise out of and in the course of the employment. It is not enough that it occur in the course of the employment nor that it arise out of the employment. Both are essential and must be established by the claimant . . . .

"We believe the decisions, English and American, are agreed that the compensation laws should be given a liberal construction, with a view of effectuating their evident purpose of placing the burden of injury and death upon industry, and we are in entire accord with that construction. However, when it clearly appears that a claimant has failed to establish that his accidental injury arose out of and in the course of his employment, or either, the duty of so declaring cannot be evaded. On the contrary, if we entertain a serious doubt we shall feel it our duty not to hesitate to apply a liberal rule of construction in favor of the claimant.

"The Compensation Act is not an insurance law requiring the employer to compensate every injury an employee suffers while in his employment, but only those accidental injuries that arise out of and in the course of the employment. As has been well said, to extend the law to cover all injuries sustained by an employee would be giving to employees protection against the common and everyday accidents to which all mankind is daily exposed, and make them a privileged class. Compensation must therefore be limited to those employees within the intendment of the legislation providing for it, and not extended to include cases clearly without its intent and purview. . . .

" . . . It is not sufficient simply to show employment and an injury during the period of employment. The employee must go further and show that the injury had its origin from a risk connected with the employment, and that it flowed from that source as a rational consequence."

In the *Pacific Fruit Express Co. v. Ind. Com.*, 32 Ariz. 299, 258 Pac. 253, the court again considered what was meant by the phrase, "arising out of and in the course of employment", in a case where the employee for his own comfort seated himself under a car to converse with co-workers. While so engaged he was injured. The court pointed out that "he abandoned his work and for the time being was doing nothing he was engaged to do", and held that in such a case the accident did not arise out of and in the course of the employment. The following statement was made:

" . . . What he was doing at the time of his injury was not reasonably necessary to his health or comfort, such as quenching his thirst, relieving his hunger, protecting himself from excessive heat or cold—acts generally recognized as incidental to his employment."

Again, in *Netherton v. Lightning Del. Co.*, 32 Ariz. 350, 258 Pac. 306, this court was required to determine whether the death of an employee, who was killed by a bolt of lightning while driving his employer's truck in the due course of his employment, was compensable. The court called attention to the fact that under statutes such as ours, making either death or injury compensable for accidents arising out of and in the course of employment, two rules have been applied by the courts; One to the effect that such an accident was compensable as arising out of the employment; the other that the accident was not compensable unless by reason of his employment the workman was more exposed to injury by lightning than were others in the same locality. The opinion sets out the standard as follows: "But the standard for testing these facts is always the same, *to-wit*, This rule was announced in the opinion of Did the employment increase the danger?" Justice Lockwood, and in the concurring opinion by Chief Justice Ross, the holding being that there could be no recovery in the case. Justice McAlister dissented on the ground that the deceased met his death not only in the course of his employment but arising out of it, within the meaning of the workmen's compensation act. Apparently, however, he assented to the rule as stated by Justice Lockwood, "Did the employment increase the danger?" Even on the assumption that this is a correct standard to determine whether an accident arose out of the employment, it seems to us now that the majority misapplied the rule in that case. We will comment upon this later.

It will be observed that in the case mentioned the court failed to take into consideration the constitutional definition of compensable accidents, appearing in article 18, section 8, Const. of Arizona. In a late decision, *In re Mitchell*, (Ariz.) 150 Pac. (2d) 355, the court was called upon to determine whether the death of an employee as a result of carbon tetrachloride poisoning was compensable under the terms of the act. The commission had made an award allowing compensation. The petitioners relied on our decision in *Pierce v. Phelps Dodge Corp.*, 42 Ariz. 436, Pac. (2d) 1017, in which we had held that an accident must be some sudden or instantaneous effect or occurrence, the implication being that there could be no recovery unless there was an external act or occurrence, usually one of violence, which caused the injury or death. In commenting upon that rule, and in effect overruling the *Pierce* case, we said:

"Furthermore it appears that the Pierce case we did not discuss or consider, probably because it was not called to our attention, the phrasing of the constitutional mandate to enact a workmen's compensation law. Certainly the legislative intent can best be gleaned by references to section 8, article 18 of the Arizona Constitution, which provides that compensation shall be . . . paid . . . if in the course of such employment personal injury to or death of any such workman from any accident arising out of, and in the course of, such employment, *is caused in whole, or in part, or is contributed to*, by a necessary risk or danger of such employment, or a necessary risk or danger inherent in the nature thereof . . . ."

"It will be noted that the italicised part of the Constitution just quoted is broader and more comprehensive than the legislative enactment appearing under section 56-936, A. C. A. 1939. A construction of the latter must be governed by the constitutional provision.

"Applying these principles to the instant case it is readily apparent that the poisoning of the deceased, which caused his death, was 'caused in whole, or in part, or was contributed to, by a necessary risk or danger of such employment.'

The statement which we have quoted from the Mitchell case has full and complete application to the facts in that case since the accident was the result of a necessary risk or danger of the employment. Whether the constitutional definition is broader and more comprehensive generally than the legislative enactment, is a debatable proposition. The rules applied in Ocean Acc. & Guar. Corp. v. Ind. Com., supra, and prior cases, with a single exception which we will advert to presently, may be harmonized with the rule of the Mitchell case.

It is the law that in construing statutes in relation to constitutional provisions, the courts must take into consideration the principle that every statute has to be read in the light of the constitution. Thus, words or phrases used in the statute are presumed to have been used in the same sense as in the constitutional provision on the subject, particularly if such constitutional provision is adopted shortly before the enactment of the statute. Except for potent reasons, courts are not given to terms appearing in the statute a meaning different from that in which they are used in the constitution. 50 Am. Jur. 261, sec. 273, "Statutes"; McCullough v. Commonwealth of Va., 72 U. S. 102, 43 L. Ed. 382; Anselmi v. Rock Springs, 53 Wyo. 223, 80 Pac. (2d) 419, 116 A. L. R. 1250. This rule of construction, however, is not to be taken too literally, and can be given only partial application in the construction of the Arizona workman's compensation act.

Sec. 8 of article 18, supra, is not a grant of power to the legislature, but a command directing it to exercise a power which it already possessed. The constitutional mandate does not restrict the legislature in its inherent powers to go beyond the terms of the constitution in making injuries from accidents, which are not mentioned therein, compensable. Home Acc. Ins. Co. v. Ind. Com., 34 Ariz. 201, 269 Pac. 501; Atkinson-Kier Bros., etc., v. Ind. Com., 35 Ariz. 48, 274 Pac. 634. While obviously the workmen's compensation act must be construed to cover all accidents as defined in the constitution, this does not mean that accidents which are not comprehended within the constitutional definition may not be made compensable by the legislature. The rule of construction of statutes in relation to constitutional provisions must be applied to the extent of construing the act to cover all accidents as defined in the constitution. But this is not to say that other accidents which may be comprised within the statutory term "arising out of in the course of employment" beyond those embraced within the constitutional definition, are not compensable.

It seems evident that when an accident to an employee in the course of his employment is caused in whole or in part, or is contributed to by a necessary risk or danger of such employment, or a necessary risk or danger inherent in the nature thereof, this would be one *arising out of* the employment. The test to be applied in accidents mentioned in the constitutional mandate to determine whether they arise out of the employment is, were they caused in whole or in part, or contributed to by a necessary risk or danger of the employment, or *inherent* in its nature. The standard is not, did the employment increase the danger, or that by reason of the employment the workman is more exposed to injury than are others not engaged. The standard in this case would be, was the risk or danger necessary or inherent in the employment.

The legislature did not confine compensable accidents to those produced by or caused by necessary risks or dangers of the employment. accidents arising out of and in the course of the The law provides for compensation for any employment. The act widens the fields of accidents. Every accident resulting in injury, unless willfully self-inflicted, comes within its provisions if it arises out of and in the course of the employment. The law does not define what "arising out of and in the course of employment" means. It does say that the phrase shall include an injury caused by the willful act of a third person directed against an employee because of his employment. Nowhere is there any limitation on what accidents may not be included within the phrases. Neither in terms nor by implication is there any limitation that the term "arising out of" shall be limited to cases where the employment increases the

danger of where the workman is more exposed to injury than are others so engaged.

For these reasons, we feel compelled to disavow the rule of the Netherton case. Neither under the constitution nor under the statute can it be held to be a proper measure to ascertain if an accident arises out of the employment. In justice to the court it is proper to say that the rule adopted in the Netheren case was largely influenced by the decision of the Massachusetts court in *In re McNicols*, 215 Mass. 497, 102 N. E. 697. The McNicols case has, in effect, been repudiated by the Massachusetts court itself in Caswell's Case, 305 Mass. 500, 26 N. E. (2d) 328, where an employee was injured by the collapse of the building in which he was working caused by a hurricane. In this case, the court said:

"The only other requirement is that the injury be one arising out of his employment. It need not arise out of the nature of the employment. An injury arises out of the employment if it arises out of the nature, conditions, obligations or incidents of the employment; . . ."

In the late case of *Harvey v. Caddo DeSoto Cotton Oil Co.*, 199 La. 720, 6 Sou. (2d) 747, the court had occasion to consider whether an accident to an employee, the result of a cyclone which demolished the employer's structure and injured the employee, was one arising out of

the employment. We quote from the opinion: ". . . the accident must be the result of being so employed."

some risk to which the employee is subjected in the course of his employment and to which he would not have been subjected had he not been so employed.

"In determining, therefore, whether the accident 'arose out of' the employment, it is necessary to consider only this: (1) was the employee then engaged about his employer's business and not merely pursuing his own business or pleasure; and (2) did the necessities of that employer's business reasonably require that the employee be at the place of the accident at the time the accident occurred?"

The court called attention to various laborious efforts by many courts in weighing the evidence in order to discern whether the hazards to the employee had been increased due to the employment, and then concludes:

"We prefer to place our decision on what we believe to be a sound footing, that is—that the deceased, by reason of his employment, was required to be in a building which fell upon him; that his death was due to the fact that his employment necessitated that he be at the place where the accident occurred and that, therefore, giving the compensation act the liberal interpretation to which it is entitl-

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ed, the accident arose out of, and was incident to the employment."

It seems to be settled beyond any doubt that an accidental injury arises in the course of employment when it occurs, as in this case, within the period of employment at a time where the employee had a right to be in the performance of his duties and while either fulfilling his duties or engaged in doing something incidental thereto—here in caring for his lunch. Employers Liability Corp. v. Montgomery, 45 Ga. Ap. 634, 165 S. E. 903; Bryant v. Fissell, 84 N. J. L. 72, 86 Atl. 458; Weis Paper Mill Co. v. Ind. Com., 293 Ill. 284, 127 N. E. 732; 71 C. J. 658, sec. 404, "Workman's Compensation Acts." In the present case since the employee had to eat on the premises, it follows that he had a right to properly care for his lunch. We feel, therefore, that the claim of the petitioner that the injury did not occur in the course of the employment is not sustainable.

From what has already been said it is apparent that the accident is not one which resulted from any necessary risk or danger of the employment, of inherent therein. It is not one of the accidents comprehended within the constitutional provision. It is one of the accidents which the law has provided for beyond those listed by the constitution. The legislature had this right. The real question in this case, therefore, is, did the accident arise out of employment. In

considering this phase, we are mindful of the rules which have been promulgated. The employer is not an insurer. If the accident occurs while the employee is engaged in some act having no relation to his duties for his own comfort or otherwise, or has abandoned his occupation even temporarily, the injury does not arise out of the employment. The rule that the employer is not an insurer simply means that only accidents which are included within the terms of the act are compensable. The question here is, do the facts in this case bring the accidental injury within the terms of the law.

To determine whether this case comes under the law, a consideration of the decisions of other courts will be helpful. An injury sustained by an employee while in the act of satisfying his thirst is generally held to arise out of the employment where the employee uses the facilities provided by the employer. Bradshaw v. Aronovitch, 170 Va. 329, 196 S. E. 684; 71 C. J. 671-2. On the other hand, it has been held that where the employee does not use the facilities in the customary way and he is injured, the accident does not arise out of the employment. Mann v. Glastonbury Knitting Co., 90 Conn. 116, 96 Atl. 368. Since, under our law, negligence does not bar recovery it would appear that this case would have no application here.

In Bolden's Case, 235 Mass. 309, 126 N. E.

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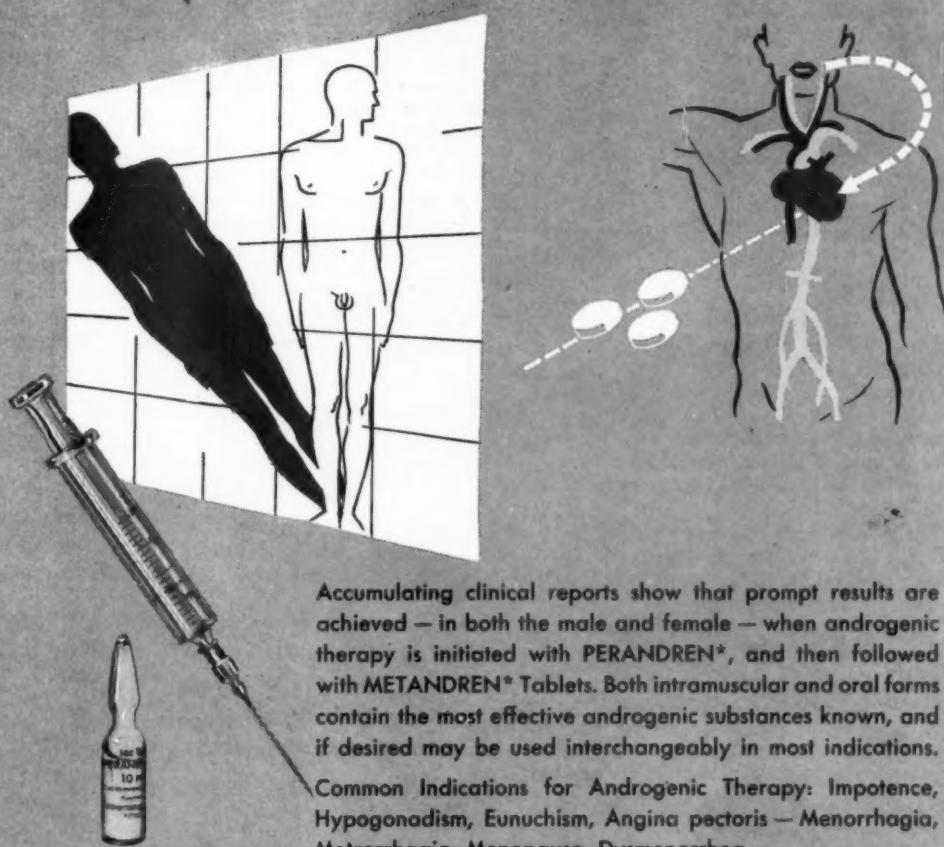
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668, where an employee was injured from a bursting bottle, which belonged to him, while he was filling it at a bubble fountain furnished by the employer, it was held that the injury did not arise out of the employment. The bottle was being filled by the employee for his own convenience in order that the chill might be taken off. The court said this was no part of the employer's business, and the use of the bottle in this manner was not sanctioned by the employer; the act was outside the scope of his employment.

The Industrial Commission of Colorado v. Enyeart, 81 Colo. 521, 256 Pac. 314, the court stated that if a workman brought his lunch on the job and was poisoned by ptomaines therefrom, such an injury would not be held to arise out of the employment.

As opposed to these and similar opinions, we find many decisions to the effect that getting fresh air, smoking, resting, creating food or ice cream, quenching thirst by water, beer or wine, taking a bath, use of telephone or toilet or other facilities, washing, pressing working clothes, and transportation to and from work are treated as arising out of the employment:

Horovitz, Workmen's Compensation, pages 114 to 117;

DeStefano v. Alpha Lunch Co., 308 Mass. 38, 30 N. E. (2d) 827, where waitress, receiving meals as part of her pay, contracted trichonosis

as a result of eating insufficiently cooked pork furnished by the employer, held to be a personal injury and accident arising out of the employment;

Vilter Mfg. Co. v. Jahneck, 192 Wis. 362, 212 N. W. 641, eating of ice cream by employee, at invitation of janitor of hospital where the employee was engaged in installing a refrigerator, and from which he contracted smallpox resulting in his death, held to grow out of his employment;

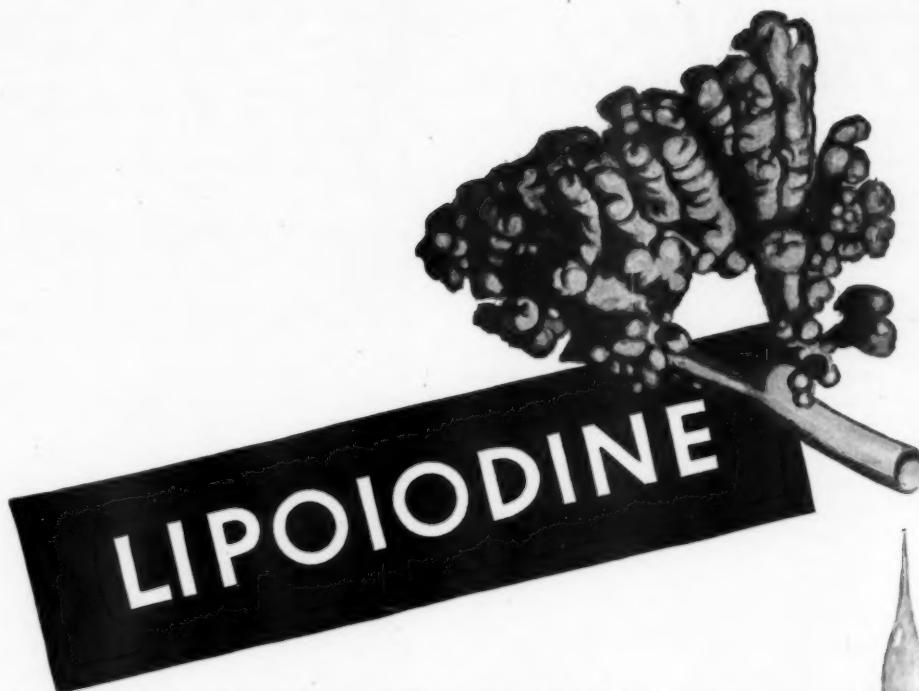
Elliott v. Ind. Acc. Com., 21 Cal. (2d) 281, 131 Pac. (2d) 521, where employee, for medicinal purposes, drank from bottle labeled wine, found in the employer's carpenter shop, which in fact contained a deadly poison resulting in his death, held to arise out of his employment;

In re Osterbrink, 229 Mass. 407, 118 N. E. 657, it was held that a workman drinking muriatic acid through mistake for his own bottle of drinking water arose out of his employment;

American Steel Foundries v. Czapala, 112 Ind. Ap. 212, 44 N. E. (2d) 204: In this case the workman's eye was injured as a result of the explosion of a glass bottle containing coffee which had been placed by him just inside the door of an annealing furnace, for the purpose of heating the coffee which he used with his lunch. It was held this was an injury arising out of his employment;

Whiting-Mead Coml. Co. v. Ind. Acc. Com.,





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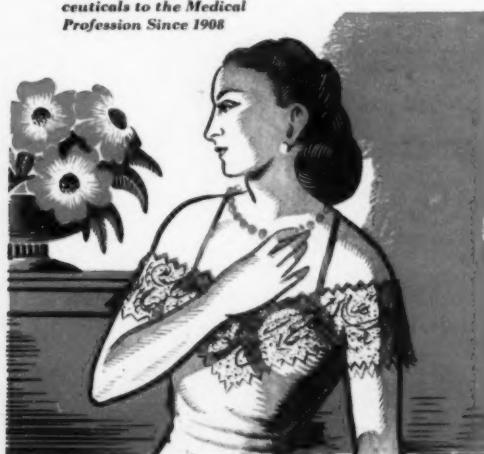
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178 Cal. 505, 173 Pae. 1105, where employee was injured through lighting a cigarette during working hours, through ignition of bandage on his hand which was saturated with turpentine, held to arise out of the employment;

Western Pipe & Steel Co. v. Ind. Acc. Com., 49 Cal. Ap. (2d) 108, 121 Pae. (2d) 35, where employer's cafeteria was closed and the employee went out to secure his dinner, and in crossing the street after parking his car was struck by an automobile, resulting in his death, held to arise out of the employment;

Ervin v. Ind. Com., 364 Ill. 56, N. E. (2d) 22, burns received by an employee from falling into a fire which he had built to warm himself as an incident to his employment, and which resulted in his death, was held to arise out of the employment;

Cudahy Packing Co. v. Parramore, 263 U.S. 418, 68 L. Ed. 366, where the deceased employee was killed in crossing a railroad track to his place of work, held to be an accident arising out of his employment.

In the present case if the lunch and Cola had been furnished by the employer to the employee Laws, and had been injured as disclosed by the evidence, nearly all of the authorities would indicate that the accident was one which arose out of his employment. In principle it would seem that the same rule should be applied here. What difference does it make who furnished the lunch. It was necessary for the employee to eat. He was authorized to bring his lunch on the premises and was required to care for it and consume it there. He was allowed an additional half hour to compensate for his lunch period. If the bottle had exploded when he was actually in the process of consuming his lunch, the claim could not well be made that the accident did not arise out of his employment because this was part of his job for which he was being paid. Does the fact that the bottle exploded when he was in the act of placing it on ice, to make it fit for consumption, alter the situation? We think not. Since the bringing and eating of his lunch on the premises during his hours of employment was one of the conditions of his employment, he most certainly had the right not only to care for it but also to properly prepare it for consumption.

It is our view that the accident to Laws arose out of the nature, conditions of his employment, within the meaning of the rule which has already been given. A machine must be given oil and cared for. If an employee is injured in handling the oil or tools required for the repair of any appliances in connection with his work, the accident is one that arises out of his employment. Likewise, employees working under the conditions as shown in this case of necessity must have sustenance. An accident arising from any preparation of their

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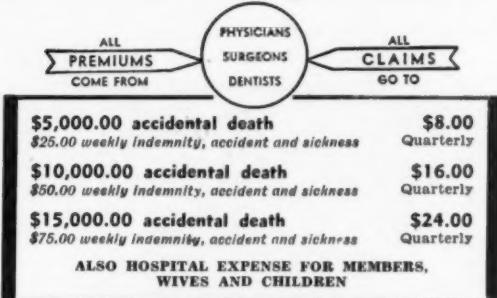


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food, or in eating, is just as much an accident arising out of the employment as in the case of caring for a machine or any other appliance. Since Laws had to eat on the job, he was not merely pursuing his own business or pleasure, but was actually engaged in his employer's business. The necessities of his employer's business required him to be at the place of the accident at the time it occurred. It is no answer to this to say that the accident was of such a character as might have occurred at the employee's home or elsewhere, and that the employment in no way contributed to or caused the bottle to explode. To take such a position is to venture into realms of possibility. Such a conclusion would be based upon speculation and uncertainty. The evidence is such as to justify the conclusion that Law's injury was the result of a risk to which he was subjected in the course of his employment, and to which he would not have been subjected had he not been so employed. Under the facts the law sustains the commission's action.

The award is affirmed.

**Book Reviews**

"PATHOLOGY OF LABOR, THE PUEPERIUM, AND THE NEWBORN," By Charles O. McCormick, A. B., M. D., F. A. C. S.: Clinical professor of obstetrics, Indiana University School of Medicine; Consulting obstetrician to William H. Colman Hospital for Women, Indianapolis City Hospital, and Sunny Side Sanitarium, Published by the C. V. Mosby Co. St Louis, Missouri. Price \$7.50.

The essentials of only the present-day obstetric thought are set forth in this symposium type textbook which is an outgrowth of a series of the author's lectures prepared for the senior medical students at Indiana University.

Pathology of labor comprises a great part of this book. In the chapter on abnormal labor we learn eutocia occurs where there is a balance between the active forces of expulsion and the passive forces of resistance. Labor may be abnormal because of the size, attitude, lie, and presentation of the fetus. Dystocia is classified into three parts. The first part, the faults in the powers, is a study of false labor pains, delayed labor, premature rupture of membranes, insufficient abdominal contractions, and rigid perineum. The treatment of prolonged labor warns of the use of powerful and dangerous drug pituitrin. The second part of dystocia, faults in the passages, often due to the faults of the soft parts as the vulva, vagina, cervix, uterine displacement and prolapse, teach that each may require cesarian section. Also included in faults of the soft parts are fibroid tumors, carcinoma—rare during child bearing period—and ovarian tumors which are believed to be indications for cesarian section. Faults of the bony pelvis comprises a very great study in the use of the pelvimeter in the diagnosis of types of pelvis. Roentgen pelvimetry has many important diag-

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nostic usages. Chief of these are in the diagnosis of multiple pregnancy, visualization of malpresentations, relationship of fetal head to the maternal pelvis, and for estimation of gestation. The four common varieties of contracted pelvis—general contracted, funnel, simple flat, and rachitic—merit a detailed description with suggested antenatal management, management of labor, and prognosis of labor. Obstetricians are cautioned to: "Carefully measure every patient." Third cause of dystocia, the faults of the passenger, excessive development of the infant, rigor mortis, abnormalities, malformations, and abnormal presentations, is very well described. The control of the size of the baby is no longer attempted by the mother's diet. "Babies grow large despite starvation diets." A complete classification of both single and double monsters are given in the appendix. We learn the management of the two complications of normal mechanism types—persistant and complete occiputoposterior positions—generally attributed to disproportion, insufficient expulsive powers, and unrecognized pelvic peculiarities. Abnormal presentations of the passenger include breech, transverse lie, face, brow, parital bone, and compound, and the management of each. Also included in this section are secundines of which the usual faults are those of the cord, the membranes and the placenta, with important guiding principles and helps to be followed. Obstetric injuries play a great part in the pathology of labor. The author considers the most serious of these the rupture of the utrine body primarily due to overstretching and the indiscriminate use of pituitrin. The cervix is believed to be the most common site of parturition injury. Prophylactic treatment: "Delivery should not be attempted prior to complete dilatation." In the chapter on obstetric operations there are very detailed descriptions of indications and technics of twenty-four operations. There is a brief chapter on etiology, clinical course, diagnosis, and treatment of postpartum hemorrhage.

The second part of this book is a study of the pathology of the puerperium and is divided into two chief forms which are puerperal infection and puerperal hemorrhage. Exhaustion, long labor, trauma, and blood loss are conducive to infection. We learn of the great work of Dr. Semmelweis, a Hungarian physician, in discovering and severely laying down the principles of obstetric asepsis just a century ago, and the subsequent low maternal mortality rate from puerperal infection. During the last half decade, infection mortality rates have fallen due to the three factors, sulfonamide therapy, general use of intravenous blood, and penicillin. Puerperal hemorrhage is most often due to retained placenta tissue and retained portions of hydatiform mole. There is a study of the anomalies and diseases of the nipples, breasts, and anomalies of mammary secretions. Other complications of puerperium are after pains, constipa-

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\**Laryngoscope*, Feb. 1935, Vol. XLV, No. 2, 149-154  
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*Proc. Soc. Exp. Biol. and Med.*, 1934, 32, 241  
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tion, hemorrhoids, cystitis, anemia, phlebitis, and psychoses. These are discussed briefly.

In the chapter on pathology of the newborn we learn that the use of the recently discovered factor, vitamin K, is an important contributor in the treatment of accidents and injuries may be cephalhematoma, wounds of face and scalp, fractures, intracranial hemorrhage, and asphyxia neonatorum which may occur during pregnancy, during labor, or post partum. Curative measures are supplied. Conditions of congenital origin and conditions peculiar to the newborn period are given merely to give guiding knowledge since such cases are usually referred to pediatricians and surgeons.

The appendix contains a description of each technic of the improved present day methods of obstetric analgesia. Among these are the administration of rectal ether, sodium pentothal, and caudal anesthesia.

Inserted through the book are 191 illustrations including 10 in color. Also, a limited number of selected references are inserted.

Fifty obstetric aphorisms completes the book. A few follow: "Reproduction is woman's most biological function." "Labor is a physical feat, and college diplomas do not enhance its ease." "Forty ounces of urine a day keep convulsions away."

L. J.

"DOCTORS AT WAR." Edited by Morris Fishbein, M. D. Editor of the Journal of the American Medical Association and of Hygeia, The Health Magazine, chief editor of War Medicine. Chairman of the Committee on Information on the Division of Medical Sciences of the National Research Council Pp. 413 with Illustrations, Published by E. P. Dutton & Co., Inc. 300 Fourth Avenue, New York. \$5.00.

"Doctors at War" is unique in that so many specialists well trained, qualified and anxious to perform their task satisfactorily, have been chosen to write on the subject that is absorbing all of their attention. The sixteen chapters that make up this book offer its readers a variety of subjects all relating to the Doctors at War. This is a book that should be read by every doctor in and out of the service because it pertains to their profession and is a story of what doctors and medical research have accomplished to save millions of American lives on the battle front and to protect the health of those of us remaining at home.

The editor's opening sentence is "Military philosophers say there could never be wars if there were no doctors," and we may also say that there could never be an army, navy or air force if there were no doctors. The editor and contributors each presents his subject in an interesting manner, absorbing one's attention throughout the chapter. Much valuable information is contained in the volume. Many pictures pertaining to doctors at war are contained in the book. They are both interesting and instructive. It is a book well worth reading carefully and is recommended both for the doctor and the laity.

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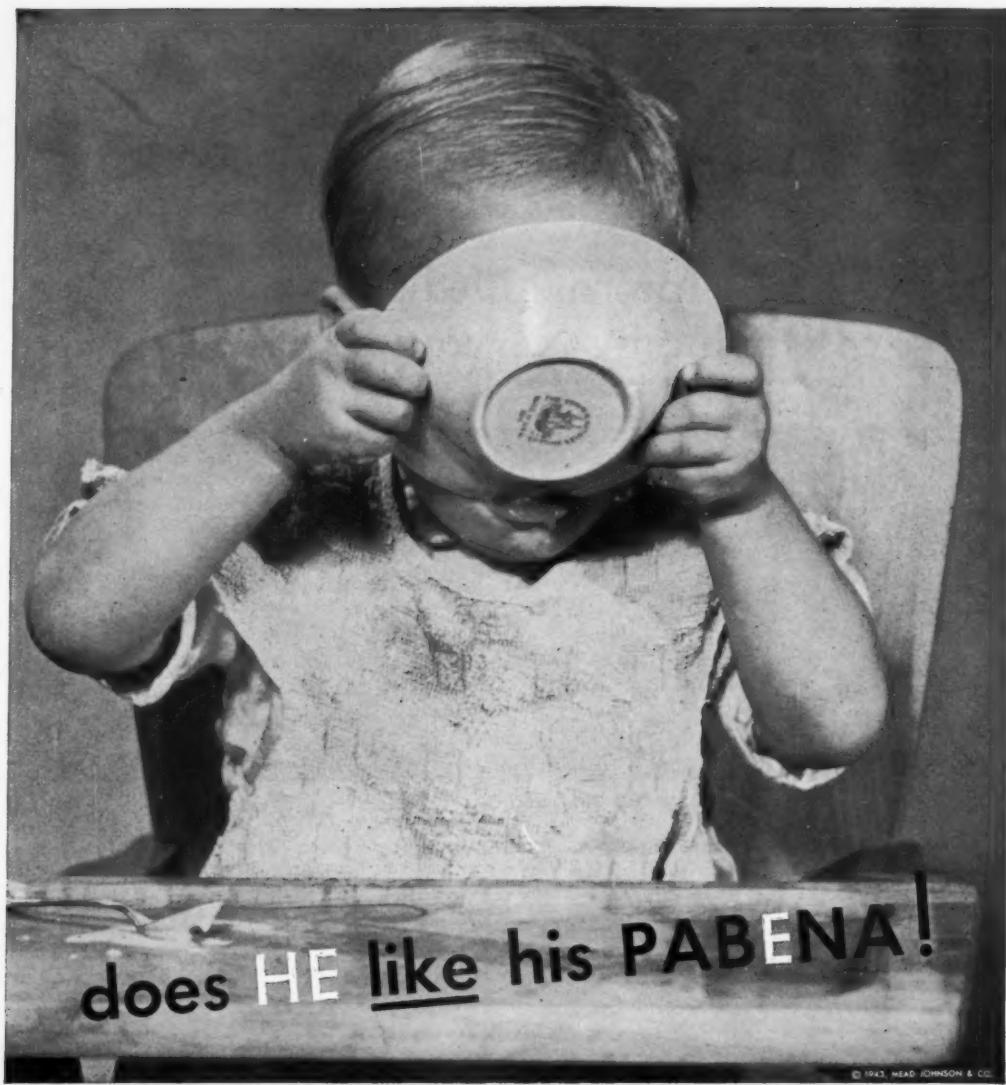
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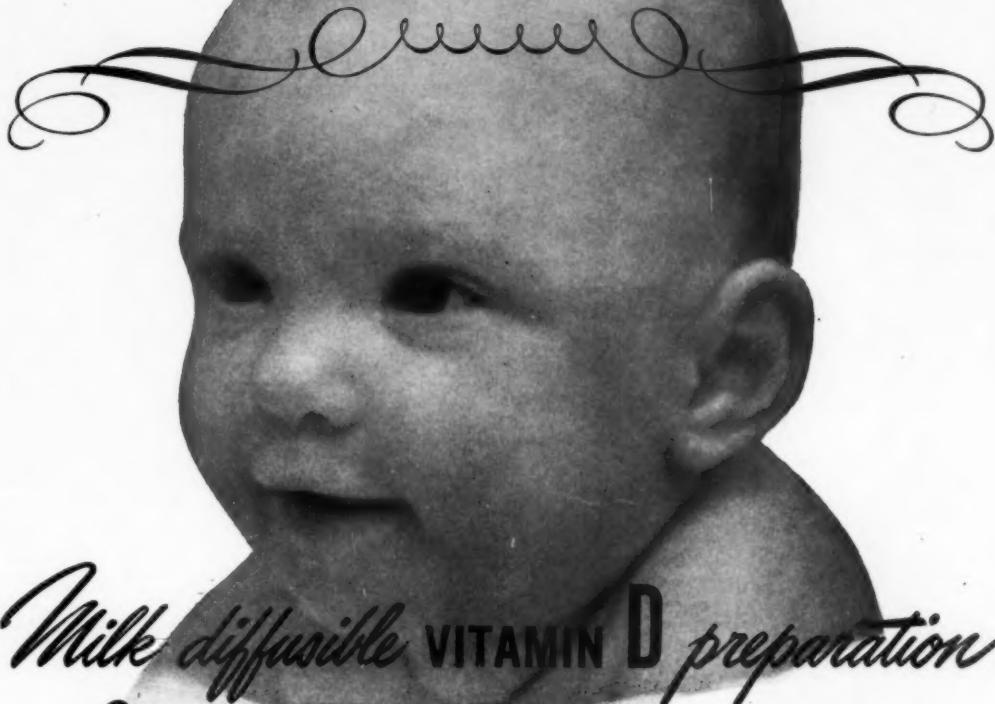
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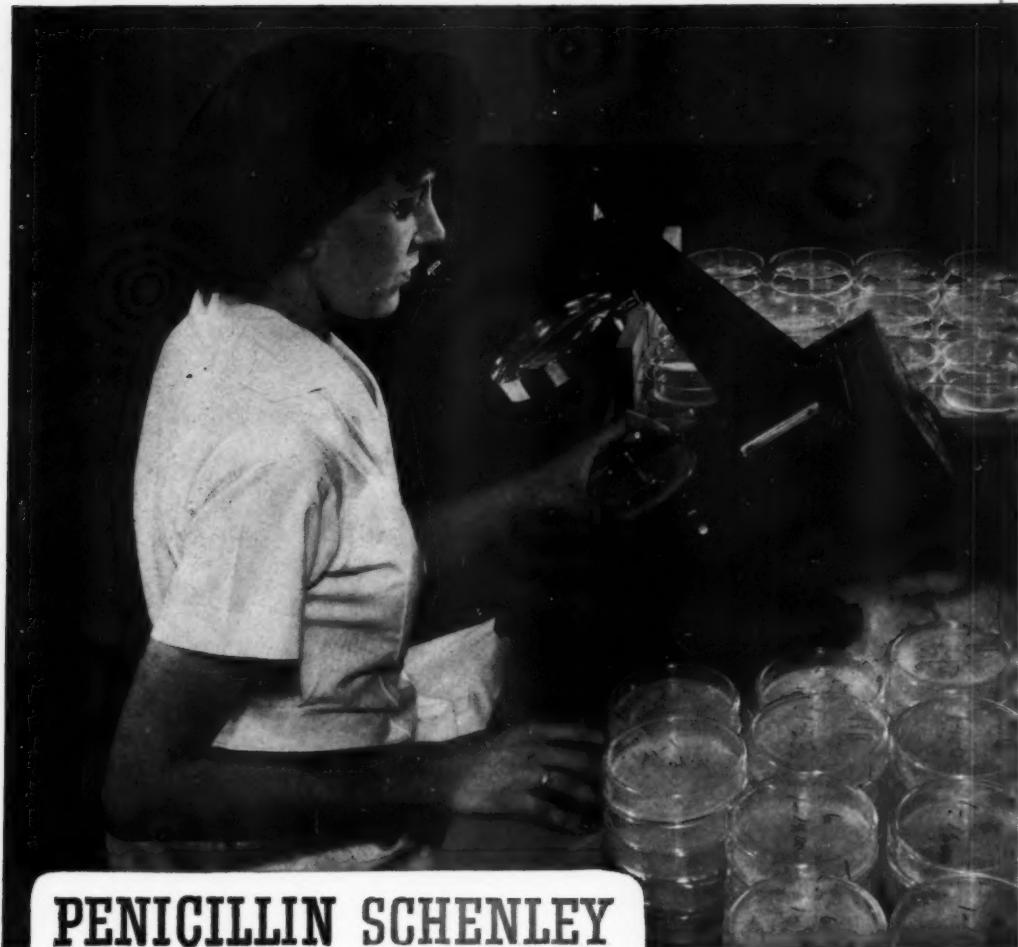
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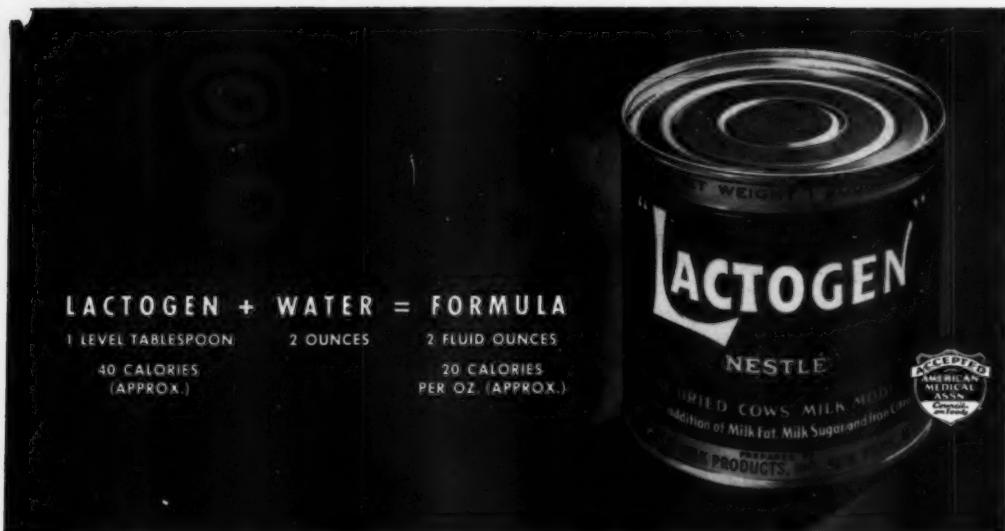
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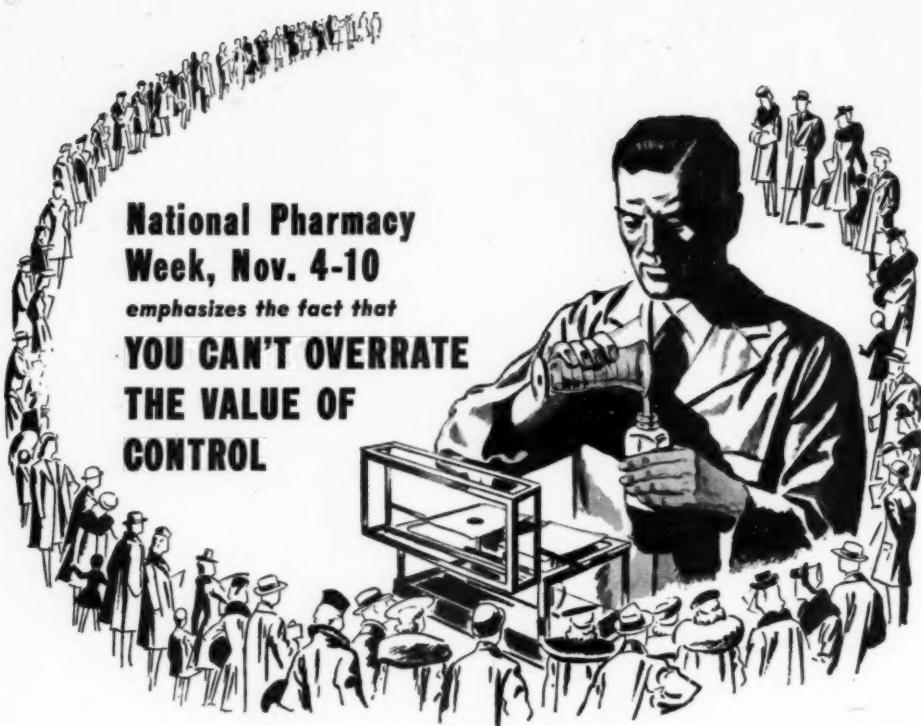
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\*Larsen, N. P.: Observations with Penicillin, Hawaii M. J. 3:372 (July) 1944.

Stansby, W. J.; Foss, H. L., and Drumheller, J. F.: Clinical Experiences with Penicillin, Pennsylvania M. J. 48:119 (Nov.) 1944.

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Murphy, F. D.: The Use of Penicillin in Surgical Infections, Ann. Surg. 120:311 (Sept.) 1944.

Kenney, J. F.: Report of a Case of Staphylococcus Bacteremia Treated with Sulfadiazine and Penicillin, Rhode Island M. J. 27:663 (Dec.) 1944.

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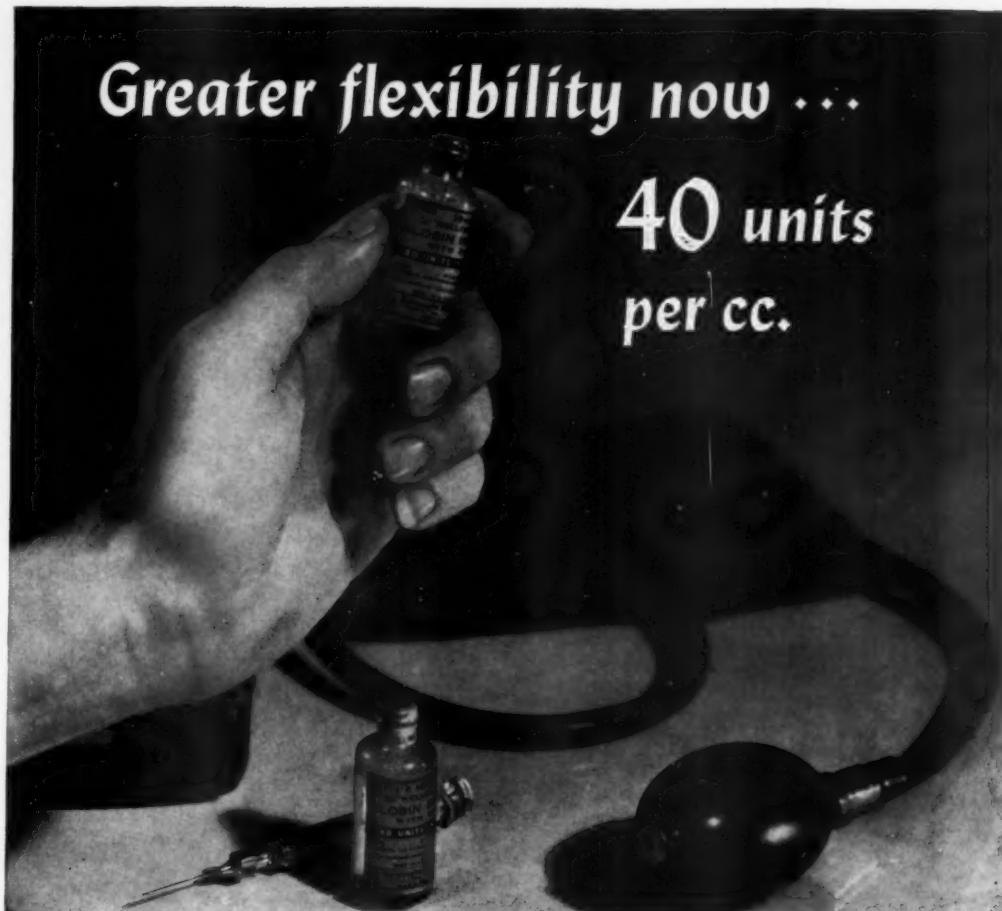
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\*Cannon, P. J.: *J. Am. Diet. Assn.* 20:77 (1944)

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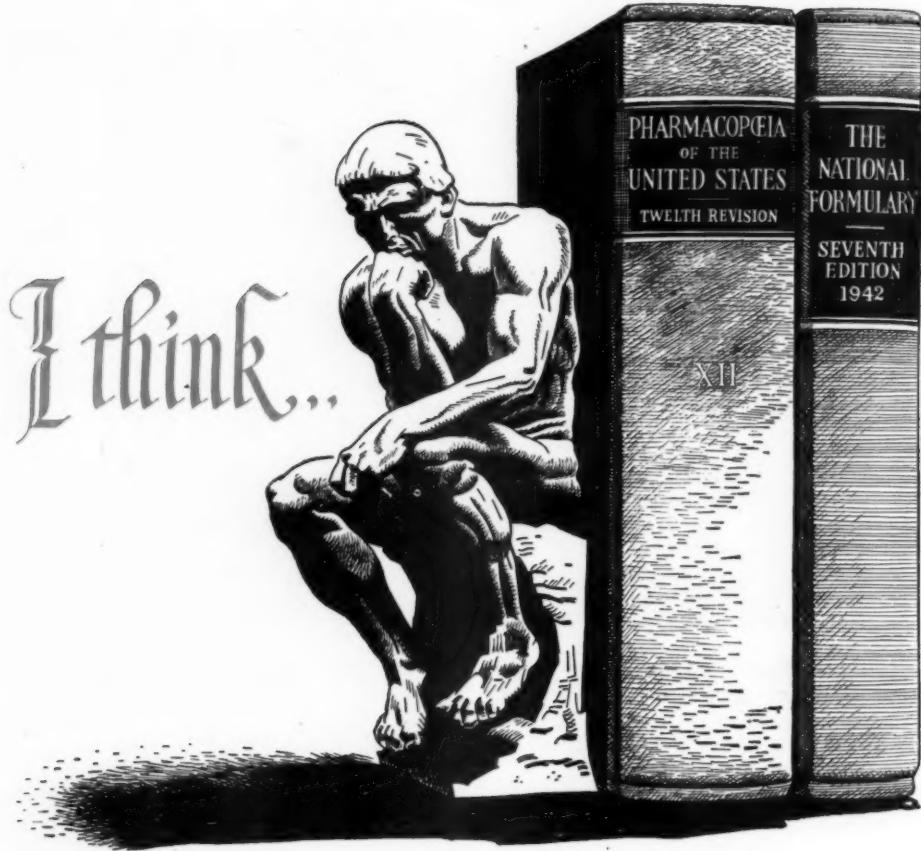


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## SIGNIFICANCE OF SOME OF THE FUNDAMENTAL PHYSICAL FINDINGS IN EXAMINATION OF THE HEART

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THE significance and utility of some of the fundamental physical findings in the examination of the heart have been lost to many of the physicians of today. The causes for this are multiple and complex. The purpose of this discussion is not to examine the causes of this situation, but to emphasize the significance and utility of some of these fundamentals.

Proper evaluation of the condition of the heart cannot be ascertained without adequate estimation of the work being performed by that organ as reflected in the periphery. Thorough examination of the pulse, which is fast becoming a lost procedure, is of tremendous value in the examination of the heart. The size of the pulse gives one a rough estimation of the amount of blood the left ventricle is expelling with each contraction. As the wave of the pressure and blood from the left ventricular systole move down the arterial tree, the artery expands and then contracts, as shown in Figure 1. The size of this expansion gives one a rough idea of the volume of blood expelled from the left ventricle. Thus we have a small pulse in instances where there is interference with the filling or emptying of the left ventricle. The most common malady causing interference with filling of the left ventricle is mitral stenosis. Some rarer conditions

which interfere with the blood getting into the left ventricle are pulmonary stenosis, pulmonary fibrosis, arterio-capillary fibrosis of the pulmonary bed, adherent pericardium and extreme pericardial effusion. The most common cause for interference with emptying of the left ventricle is aortic stenosis. A large pulse, on the other hand, is observed in conditions which will increase the output of the left ventricle, such as exercise, fever, hyperthyroidism or any condition increasing the metabolism of the body. As a rule a large pulse is present in aortic regurgitation, but this is not always true.

The contour of the pulse gives one additional invaluable information regarding the change in pressure and flow of blood in the arteries with contraction of the left ventricle. One of normal contour has the usual physiological requirements. A tracing of a pulse of normal contour is shown in the left upper tracing of Figure 2. A pulse which rises rapidly and falls rapidly is called a celer pulse. An extreme celer pulse is often called a water-hammer or Corrigan pulse. A pulse of celer contour denotes a leak at one or the other end of the system, right upper tracing of Figure 2. The most common place for this leak is in the periphery. Conditions causing vasodilatation of



Figure 1—Dilatation and contraction of an artery is shown diagrammatically before, during, and after passage of the wave of pressure and blood from contraction of the left ventricle.

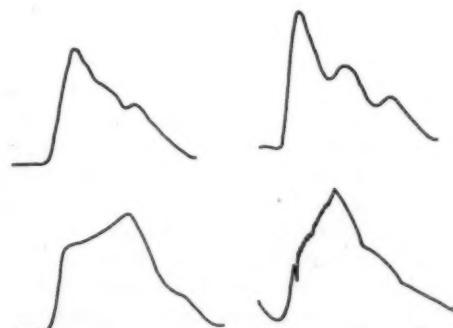
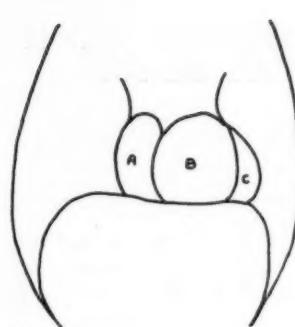
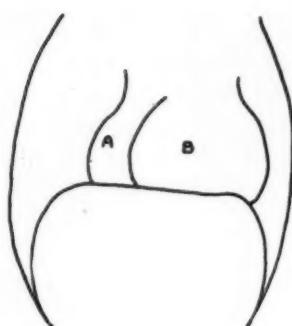


Figure 2—pulse tracing denoting contours of the pulse are shown. The left upper one is of normal contour, the right upper tracing is a celer pulse, the left lower one is a diagram of the way a plateau pulse feels to the examining finger, and the right lower tracing is a plateau pulse showing the anacrotic thrill.



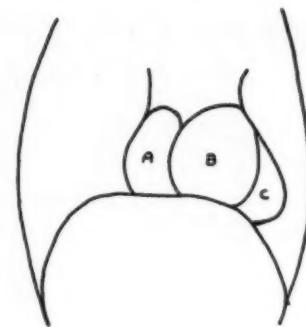
**A:** Right auricle  
**B:** Right ventricle  
**C:** Left ventricle

Figure 3—The normal relative positions of ventricles and the normal relationship of the diaphragm and the costal margins are shown diagrammatically.



**A:** Right auricle  
**B:** Right ventricle

Figure 4—Effect of enlargement of the right ventricle upon the relationship of the ventricles and diaphragm and costal margins are shown diagrammatically.



**A:** Right auricle  
**B:** Right ventricle  
**C:** Left ventricle

Figure 5—Effect of enlargement of the left ventricle upon the relationship of the ventricles and the diaphragm and costal margins are shown diagrammatically.

the peripheral vessels, such as exercise, fever or circumstances producing an increase in metabolism are the more common. The leak may be at the other end, however, due to insufficiency of the aortic valve. A plateau pulse signifies that there is some interference in the flow of blood and pressure from the left ventricle. The pressure and blood volume changes in the arteries rise slower and are maintained longer. This gives the impression to the examining finger of the graph in the lower left corner of Figure 2. The actual graphic recording, on the other hand, is more comparable with the graph in the right lower corner of Figure 2, which also illustrates the anacrotic thrill so frequently palpable over the carotid artery in such conditions. Aortic stenosis is the classical condition causing such a pulse. The pulse is best examined by palpation of the brachial or carotid arteries. Estimation of the size and contour of the pulse and evaluation of the findings are acquired only by continuous practice. Thus we see that these simple, yet fundamental examinations of the pulse give us indispensable information regarding the normal or pathologic physiology of the peripheral circulation which is caused by certain cardiac lesions. A celer pulse of large size denotes a leak in the periphery or at the aortic valve and manifestations of increased metabolism (exercise, fever, hyperthyroidism, etc.) or of an aortic insufficiency are immediately investigated. A plateau pulse with

or without an anacrotic thrill over the carotid artery makes one promptly investigate for other evidence for aortic stenosis. A small pulse of normal contour brings to mind several lesions, the more common one is mitral stenosis. These few remarks, I think, emphasize the significance and utility of thorough examination of the pulse. Arrhythmias of the heart are best ascertained and studied by auscultation over the precordium.

Palpation for accessibility of the ventricles is another very valuable adjunct in the evaluation of the condition of the heart. The normal relative positions of the ventricles in the thoracic cavity are shown graphically in Figure 3. It is to be noted that the right ventricle is anterior to the left ventricle and that only the tip of the left ventricle extends beyond the left border of the right ventricle. If the heart is enlarged it may be of tremendous diagnostic value to ascertain whether or not one or both of the ventricles are enlarged and if only one is enlarged, which one. This may be ascertained by palpating over the precordium. Enlargement of the right ventricle is graphically illustrated in Figure 4. In such a case the right ventricle enlarges in all directions and the anterior enlargement can be ascertained by palpation over the anterior precordium. A heaving and accessible right ventricle can thereby be felt. Enlargement of the left ventricle, on the other hand, will be ascertained by palpation to the left of the right ventricle and an

excessable and pulsation mass will be felt beneath the examining hand. This simple method of ascertaining ventricular accessibility is of tremendous value in evaluation of certain cardiac lesions. In a case with an accessible right ventricle without an accessible left ventricle, a lesion would be anticipated which would put more work on the right ventricle and not on the left. Mitral stenosis is the most common of these lesions. If, on the other hand, the left ventricle was accessible and the right was not, a lesion which would place more work on the left ventricle would be anticipated. Enlargement of the left ventricle without enlargement of the right is shown graphically in Figure 5. If both ventricles are accessible there may be a combination of lesions which would place excessive work on both sides of the heart or a condition which would cause hypertrophy and dilation of both ventricles. Of these arteriosclerotic heart disease is the more common. We should not forget, however, that the most common cause for right ventricular failure is left ventricular failure. The diagnosis of a significant mitral stenosis would be very questionable in a patient with an enlarged heart without the right ventricle being accessible and still more questionable if the left ventricle alone was accessible. Likewise, a diagnosis of a significant aortic regurgitation would be questionable if the right ventricle alone was accessible. On the other hand, an accessible right ventricle would be consistent with mitral stenosis and an accessible left ventricle with

an aortic lesion if other manifestations were present.

Alteration in the excursions of the costal margins is another diagnostic sign which is unfamiliar to many physicians. Under usual conditions the mechanical relationship between the costal margins and the diaphragm is almost that of an equilibrium and upon inspiration the costal margins move laterally with vigor. A depression of the diaphragm gives it the mechanical advantage and causes the costal margin to lag or to be pulled in on deep inspiration. In a normal sized heart, as shown in Figure 3, the movements of the costal margins would be normal. Enlargement of the right heart would cause a depression of the left median leaf of the diaphragm and a lagging of the excursion of the left medial costal margin, Figure 4. Enlargement of the left ventricle depresses the left diaphragm and causes the left lateral and medial costal margin to lag or be pulled in during deep inspiration. This is shown diagrammatically in Figure 5. Extreme enlargement of the right ventricle or a pericardial effusion depresses the dome of the diaphragm and causes a lagging of the movement of both medial costal margins or even a pulling in of the lower sternum on deep inspiration. These relationships are shown in Figures 6, 7 and 8.

Most physicians inspect for abnormal pulsations over the great vessels of the upper mediastinum, but palpation for an accessible aorta is rapidly being forgotten. It is not unusual

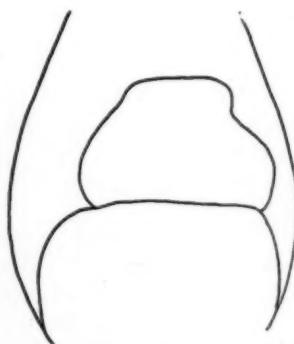


Figure 6—Effect of pericardial effusion upon the dome of the diaphragm from an anterior-posterior aspect is shown diagrammatically.



Figure 7—A diagrammatic illustration showing the lateral relationship of a normal sized heart to the dome of the diaphragm, and of the anterior leaf of the diaphragm to the median costal margins and lower sternum.



Figure 8—Depression of the dome and the anterior leaf of the diaphragm by enlarged pericardium is shown diagrammatically. Such depression gives the anterior leaf of the diaphragm the mechanical advantage and causes both median costal margins and lower sternum to lag or be pulled in with inspiration.

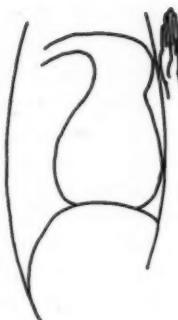


Figure 9—A diagram to illustrate palpation of an accessible aorta by the hand.

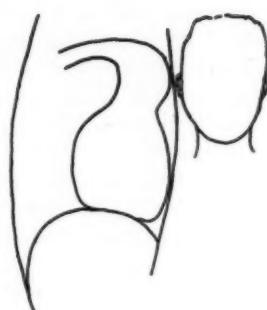


Figure 10—A diagram to illustrate palpation of an accessible aorta by the head.

for the dilated aorta not to be accessible by palpation with the hand, Figure 9, but it can be felt by the head if the head is applied over the accessible area, Figure 10. Time and again, the cause for a mass in the superior mediastinum can be ascertained by the presence of an accessible aorta, as ascertained by accessibility with the head. It is not generally appreciated that the head is more sensitive in the palpation of the accessible aorta than is the hand.

The significance and utility of these few fundamental physical manifestations are obvious. A patient with a small pulse of normal contour, an accessible right ventricle without an accessible left ventricle, but with an accentuated pulmonary second sound would have mitral stenosis in over 95 per cent of the cases.

A patient with a blowing systolic murmur at the mitral area with the left costal margin lagging or moving in on deep inspiration and the right costal margin moving normally, with an accessible left ventricle without an accessible right ventricle would have a relative mitral regurgitation due to dilatation of the mitral ring secondary to a dilated left ventricle. A patient in whom the costal angles did not increase and the lower sternum pulled in during inspiration and had a paradoxical pulse would have a pericardial effusion or an adherent pericardium.

#### SUMMARY

A few fundamental principles in the examination of the heart have been discussed and their utility and diagnostic significance have been emphasized.

## CONTINUOUS CAUDAL OBSTETRICAL ANALGESIA

ROBERT J. BARFOOT, M. D.  
Phoenix

**W**HENEVER a new medical discovery is important enough to find its way into the archives and annals almost always there is the same sequence of events. After the first latent period of warranted skepticism a shower of articles and papers, long and professional floods the press. Most of them are on the one hand, over-enthusiastic reporting a handful of cases with slipshod evaluation, while others, representing the reactionary type, tear down the work perhaps on the strength of one or two shaky premature failures or other dire bad results. Still others point out that the drug or method or disease has been known for years and was long since abandoned by the old timers.

After a time, however, exact, critical, and informative reports begin to appear, gradually, one by one. It is then and only then that one can evaluate the true worth and pedigree of the new medical brain child.

As in the case of other comparable recent medical advances—the discoveries of Sulfa drugs, Penicillin, Rh factor, and so on—the development of the continuous caudal method of obstetrical analgesia has gone through a similar cycle. There has been much discussion, pro and con. Now, after four years probation representing in this country alone well over 30,000 cases, and with reports from scores of good clinics, we can expect to derive clear cut

factual information about this method. It is the purpose of this article to present the picture exactly as it stands to date and from a practical viewpoint.

It is true that caudal anesthesia of itself is not new. Single injection caudal anesthesia was first used by Cathelin in 1901 only three years after intra-spinal anesthesia was first developed. It is also correct that single injection caudal anesthesia has been used in obstetrical cases by a number of authors whose reports date as far back as 1909 when Stockell used it first on his 141 cases. Any type of caudal obstetrical analgesia has never been brought forcibly to light, however, until in December of 1941 when Hingson first used continuous caudal anesthesia as obstetrical analgesia. This closely followed the introduction of continuous caudal anesthesia to surgery in October, 1941. Hingson justly deserves credit for developing this method of obstetrical analgesia and in giving it proper publicity to the medical profession.

Caudal anesthesia by definition implies the deposition of a locally acting anesthetic agent in the epidural space of the bony sacral canal where sacral nerve fibres traversing the canal are rendered incapable of transmitting pain. These nerve fibres supply the perineum and lower extremities and carry sensory nerves from the uterus. As greater quantities of anesthetic solutions are injected into the canal the anesthetic agent diffuses epidurally to higher levels and blocks off successively higher nerve roots. Hence 10 cc of a solution anesthetizes S3 and below, 20 cc anesthetizes L5 and below, 25 cc, L2 and below, 30 cc, T11 and below and so on. It is clear to see, then, that 20 to 30 cc of solution are appropriate amounts to inject to obtain satisfactory perineal and uterine anesthesia such as is required in obstetrical cases. It is clarifying to realize that uterine motor nerve fibers come from higher levels and via a different pathway. From this we can see that caudal anesthesia has no effect in halting labor.

Caudal anesthesia has its effect entirely outside of (epi) the dura. If the huge doses used in this method were injected subdurally into the spinal fluid dire results would follow. Although this is a hazard it seldom happens since the meningeal coverings of the spinal cord normally only reach a short distance into

the upper reaches of the sacral canal (to the 2nd sacral segment) and the subdurally located spinal fluid is pretty well out of reach of the needles ordinarily used in caudal anesthesia.

The last four years have seen the development of many different techniques, tricks, and embellishments in technique in the administration of continuous caudal obstetrical analgesia. Basically they all attempt to accomplish the same objective—to bathe the nerves in the sacral canal with a continuous or repeated supply of anesthetic solution with a maximum of safety to the patient. An average basic technique is described below. A good knowledge of local anesthesia, anesthetic drugs, nerve physiology, and a thorough familiarity with sacral anatomy as well as proficiency in obstetrics is presupposed.

#### *Equipment—*

B. P. apparatus

Merthiolate spray

Spinal sheet, sterile draping

#### Syringes

1—10 cc

1—30-50 cc

#### Needles

No. 25 "hypo"

No. 20 1½ inch

Small blunt pointed cannula to fit into ureteral catheter

No. 15 spinal 10 cm with stylet

Ureteral catheter No. 4

One inch adhesive tape

A suitable anesthetic record

#### *Preliminary Injection—*

The patient's blood pressure has been recorded. She is in active labor and cervical dilation is progressing. She is placed on her side or in the knee chest position, the latter being easier for the anesthetist, the former easier for patient (either is satisfactory). Sacral landmarks are obtained. The approximate center of a triangle marked out by the sacral hiatus and the two sacral horns are discovered by placing the tip of the index finger on the tip of the coccyx and measuring a point proximally which corresponds to the middle of the proximal phalanx. This distance is about 5 cm or one one-half the length of the caudal needle. Approaching the patient from her left side the thumb of the left hand is used to palpate the sacral hiatus. One bears in mind the manifold

possible anomalies of the anatomy in this region. One possible pitfall is the insertion of the needle through the sacrococcygeal joint into the rectum or even into the baby's head. If such a status is suspected it may be ascertained by palpating the needle rectally. In fact if anatomy is too confusing one may palpate rectally the sacrococcygeal joint and use this as a point of reference for the injection externally. Some men routinely develop their orientation by feeling for the sacrococcygeal joint in this manner.

When the hiatus is discovered a 10 cc syringe is filled with 1½% procaine and using a No. 25 hypo needle a skin wheal is made in the center of the hypothetical triangle described above. The No. 20 1½ inch needle is attached and with the shaft at a 45 degree angle with skin the hialt membrane is sought. Its penetration is accompanied by a slight snap or a sense of "giving." By this token the needle point should be in the saeral canal. The left index finger may be used to guide the needle's course—4 to 6 cc procaine are deposited in the canal and the remainder is deposited during withdrawal of the needle. At this time one must take care to reaspire the syringe frequently to ascertain no intraspinal or intravascular injection. The No. 20 needle is withdrawn, B. P. registered, and the patient is observed for 10 minutes for possible reaction or idiosyncrasies. The preliminary injection is made without sterile gloves, the only preparation being merthiolate locally and clean hands.

#### *Insertion of the Caudal Needle—*

Ten minutes after the preliminary injection, if there have been no signs of untoward reaction and blood pressure remains fairly well stabilized the final injection is begun. The area is represerved with merthiolate spray and a sterile drape applied. The patient is either on her left side or more preferably in a knee chest position. The anesthetist wears sterile gloves. In a repetition of the preliminary injection the thumb of the left hand is used to seek out the sceral hiatus while the caudal needle (No. 15) is grasped by the thumb and index finger and inserted into the skin at the former wheal site at an angle of 45 degrees bevel up. Penetration of the skin with the large caudal needle is commonly difficult and is often accompanied by a snap which frightens the patient. The hialt membrane is sought

and punctured at which time the needle is in the sacral canal. Its shank is depressed to something in the neighborhood of a 20 degree angle with the skin and the needle is passed on into the narrow bony space to a distance of 5 to 7 em on the needle. Here again the left index finger acts as a guide. The width of the canal as well as its shallowness is quite variable. Gentle A-P manipulation of the needle will usually discover bony anterior and posterior walls if the needle is in the canal. Care must be taken not to penetrate the plexus of veins within the canal which is heralded by a return of blood when the stylet is removed from the needle. In such a case the needle is withdrawn a bit or given a half turn. Atraumatic manipulation is important to prevent venous thrombosis; a fatal case of pulmonary embolism has been traced to sacral vein thrombosis following caudal analgesia. If spinal fluid is aspirated at any time during the technique the entire method is discarded.

#### *The Final Set-up—*

When the needle has definitely been placed properly and does not lie subcutaneously or in the rectum its stylet is withdrawn and a patent No. 4 ureteral catheter is threaded into the needle to the 17 to 20 cm mark measured at the hilt of the needle. The needle is now removed being threaded over the catheter. In its removal the catheter withdrawn to the 11 to 15 cm mark as measured at the skin. If the caudal needle was properly placed this procedure is easy.

A No. 20 cannula is fastened to the catheter and the large syringe attached. Gentle suction for a few seconds demonstrates that the sacral veins or subdural space have not been penetrated. If spinal fluid is obtained the technique is discarded. If blood returns the catheter is adjusted until none appears and added care is used lest intravascular injection should occur. Blood pressure is recorded and 30 cc of 1½% procaine is injected. There is usually some resistance to injection partly due to the calibre of the apparatus and partly to the resistance of the sacral canal. The injection is made fairly rapidly. Simultaneously the patient may move her legs slightly, complain of pain or tingling or burning in the legs, or of numbness in the toes. These manifestations are the first effects of the block and

suggest that a successful anesthetic will ensue. Fairly complete anesthesia is obtained within 15 to 20 minutes, the feet, usually cold to labor, become warm due to vasodilation.

The ureteral catheter is now taped to the buttocks and side of the abdomen along with the syringe and the patient is returned to her back.

The relief obtained is quite gratifying in 4 out of 5 cases. In fact it is often so complete that neither the obstetrician nor the patient realizes that the second stage of labor is practically finished until the fact is made known by an interfemoral struggling or a cry. It is for this reason that the entire labor under caudal analgesia must be closely supervised. Often the mother will be vaguely aware of uterine contractions either by feeling her abdomen or when the anesthesia is beginning to wear off. The usual thing is to allow the woman to "come out a bit" before further injections are given. The repeated doses generally 30 cc are given at 60 to 90 minute intervals depending on how fast the patient metabolizes the procaine. Huge total amounts are tolerated.

The blood pressure is recorded at frequent intervals. A drop of 10-15 mm is expected due to vasodilation in the lower extremities. A drop in excess of 20 mm bears careful watching for possible reaction or intraspinal injection. If such a fall in blood pressure occurs ephedrine is given. An oral barbiturate is often given to allay nervousness and to counteract drug reactions.

With the finish of the third stage the method is discontinued. The catheter is removed and the sacral area is painted with collodion. The patient is returned to her room and is expected to recover completely within an hour or two.

#### *Comments—*

If the method is successful it is very dramatic. Pain is completely relieved. The first and third stages are shortened and are more nearly ideal. Complete anesthesia and relaxation of the perineum occurs, making possible virtually any obstetrical operation including Caesarean section. This is fortunate since because of no expulsive urge patients often have to have an operative delivery. The second stage is often prolonged. Generally the infants cry lustily at birth in contrast to the blue

stuporous babies characteristic of narcotic analgesia. However, last year several workers reported infant toxicity blamed on the local anesthetic agent used with caudal analgesia.

Variations in technique are many. Originally the method made use of a special malleable needle which has been discarded for the easier ureteral catheter method developed by Lundy. Continuous drip methods have been devised to prevent intraspinal injection and for simplicity's sake. Different minor details have been modified as time goes along but the technique just described which is popular in the middlewestern clinics bids best to survive. Pontocaine, metycaine, and procaine in various concentrations have all been used as anesthetic agents. The latter two seem to have greater favor, procaine being the least toxic and metycaine the more effective.

A number of proven disadvantages aside from those previously implied must be mentioned. Continuous caudal definitely increases the incidence of occiput posterior presentations. Deaths due to sacral infection have been reported. Rarely a permanent paralysis will result. In general, however, the risks and complications compare very favorably with those of the narcotic methods of analgesia especially when infant mortality is considered.

The great value of this method cannot be denied but the trend is for its less widespread use. The complexity and time-consuming feature of the method makes its general use in private practice inconvenient and especially impractical in busy times. Very pointed indications can be seen in instances of heart or lung disease and in cases of premature labors. It is here and in the case of the physician who is specially equipped and who will cautiously select and watch his patients that continuous caudal obstetrical analgesia will probably see its greatest future use.

Much of the information contained in this paper is based on the writer's personal observations at the Mayo Clinic Dept. of Anesthesia and the State University of Iowa Dept. of Obstetrics and Genecology. The technique described herein is a composite of that used at these institutions.

Although having observed and studied this method extensively in two outstanding clinics

in the middlewest, my own personal experience with the method in private practice has been meager.

I have used continuous caudal analgesia in only six obstetrical cases. It was quickly learned that the method is very impractical in war times when hospital personnel, and the physician's time are so much at a premium. The results obtained in this very small sampling are in keeping with statistics at large. Three of the six achieved perfect results. One of these, a multipara, delivered spontaneously; another multipara required low forceps; the third, a multipara, required low forceps. One patient developed incomplete or hemianesthesia. Only one multipara, highly nervous and emotional, proved to be an utter failure. The sixth patient, a multipara, progressed so rapidly that by the time the caudal analgesia had been in-

stituted she had reached the second stage but this and the third stage proceeded very painlessly much to final satisfaction. "Caudal" was attempted on three other multipara but had to be abandoned because of a too rapid first stage.

When the method works properly in the case of the multiparous patient who has previously felt the pangs of childbirth, she is invariably enthusiastic. The method should be used on emotionally stable women, who are unlikely to have complications, and who either have specific indications such as heart disease or who are very well acquainted with the principles involved and who specifically ask for it. Many individuals are hesitant to "have the doctors working on the spine." My observations militate against a completely routine use of continuous caudal obstetrical analgesia.

## RH HAZARDS IN GENERAL PRACTICE

W. H. OATWAY, Jr., M. D.  
Tucson, Arizona

**T**HREE is no doubt that the Rh blood typing was invented to make life more complicated for the doctor and some of his patients. It also seems, on first inspection, to be a remote and obscure procedure from which no good can possibly arise.

However, the hazards which can result from not knowing about the Rh status of a patient are definite, and are not restricted to big city hospitals nor the records of research hematologists. Prevention of these hazards depends chiefly on an understanding of certain facts which have been gathered together in the past few years, and an expansion of laboratory blood grouping methods.

\* \* \*

A case which typifies one of the hazards is presented here, preceded by a brief outline of the mechanism by which such conditions are produced.

\* \* \*

It was discovered in 1940 that, in addition to the conventional blood groups; all individuals could be further subdivided into two groups according to the presence or absence of a certain antigenic substance in the red blood cells. Those in which the substance was present were said to be Rh positive (+);

those who did not react were Rh negative (-). The "Rh" label came from "rhesus," since the reaction was first observed when blood from that type of monkey was injected into rabbits to produce a serum. The serum was used to demonstrate the antigen in humans. About 85% of humans are Rh positive and 15% Rh negative. There are even less negative reactors in colored and oriental individuals. (Most of the immunology has been done by Landsteiner and Wiener, and Philip Levine and co-workers. They have found other sub-groupings which have no direct bearing on Rh syndrome, and will not be mentioned.)

The first clinical application of his information was in *erythroblastosis foetalis*. It was found that the mothers were almost always Rh negative, the infants and fathers were Rh positive. The mothers were usually multiparas, with one or two normal children. They then gave birth to a child with erythroblastosis, and all later pregnancies were similarly complicated. (Erythroblastosis often masquerades as "anemia of the newborn," or "hydrops foetalis," or "icterus gravis neonatorum.") It seemed possible that the early pregnancies conditioned the mother in some way which eventually produced a change in the foetus in utero.

This was later proven so: the Rh positive foetus produced anti-Rh antibodies in the mother; the maturation of red blood cells was inhibited; the foetus attempted to compensate by erythropoiesis outside of the marrow; and hemolysis often occurred. The antibodies of the mother can be of the agglutinating or of the blocking type. The latter is the more serious. The titer of antibodies, and the duration of exposure of the foetus to them, are factors in prognosis.

A more recent correlation has been in the explanation of certain *transfusion reactions*. Reactions of increasing severity have been noted in patients whose ordinary grouping and cross-matching were known to be perfect. It was found, upon testing for the Rh factor, that many of the recipients were Rh negative, that they had received previous transfusions, and that the donors were Rh positive. The early transfusions had produced anti-Rh antibodies which eventually resulted in violent hemolytic reactions.

It is also possible that sensitizing a woman by transfusions may be a short-cut to the production of erythroblastosis if she later becomes pregnant.

Both methods of isoimmunization (transfusion and an Rh positive foetus) are similar in their immunological end-result.

\* \* \*

**CASE REPORT:** The patient is a white female aged 37, first seen in 1943. She had a very complicated condition, which on complete examination could be listed as follows:

1. Generalized subacute rheumatoid arthritis.
2. Chronic purulent generalized sinusitis, with bilateral antral windows.
3. Chronic purulent bronchitis.
4. Nephrectomy, left; nephroptosis, right, (kidney palpable at the anterior abdominal wall.)
5. Early mild hypertension.
6. Drug sensitivity (codeine, aspirin, phenobarbital.)
7. Aversion to medicines (iron, liver extract, etc.), and to most foods.
8. Secondary hypochromic anemia (3.5 to 3.7 million RBC; 65% to 70% hemoglobin.)
9. Undernutrition.

During the course of the winter the anemia worsened about 10%. She was sent to a hospital for transfusion, since at the time of the

last previous transfusion, she had had a "bad reaction."

The transfusion was followed by a chill, fever, malaise, and a mental condition. In spite of special nursing she tilted off the bed while trying to get up and broke a leg at the neck of the femur. This was perfectly pinned a few days later, but the blood count had again dropped, and another transfusion seemed indicated.

It was decided to obtain blood, do a plasmapharesis, and then infuse the red cells suspended in saline. This was done, and the patient had almost no reaction (fever of 99 degrees).

An Rh test was made at that time and she was found to be Rh negative. Another transfusion was needed a few weeks later, and an Rh negative donor was sought for but not found.

It is notable that only a year and a half ago there was no Rh classification on the donor list, and scanty emphasis was laid on the importance of this patient's negative Rh reaction by the clinicians. It was thought that another plasmapharesis transfusion would suffice.

The transfusion was given and it almost resulted in death. The patient had a severe chill, fever, and disorientation. An anuria occurred and persisted for 16 hours, followed by dark red urine for 24 hours, and jaundice for a week. The blood pressure became elevated 30 mm., the kidney became swollen and tender, and symptoms of headache, vertigo, and nausea were present. Fluids were given intravenously, and she was given cardiac supportive treatment. The syndrome gradually subsided in 10 days, with the blood pressure lowering slowly during the next few months.

\* \* \*

**DISCUSSION:** The probable explanation of the occurrences in this case is simple: The patient was an Rh negative reactor; previous transfusions had sensitized her to Rh positive blood; she had reactions of progressing severity to transfusions; the transfusion without reaction was possibly Rh negative blood; and the final hemolytic reaction was the result of the cumulative sensitizations.

The patient may be given Rh negative blood with safety. The plasmaphareses were a waste of time, and a delusion, since the red cells contained the harmful factor. A pregnancy is im-

probable, but would be hazardous to the foetus in this case because, though she had had none previously, she has been sensitized by transfusion.

There is no evidence that her other ailments are connected to the blood condition except as aggravating factors.

A general testing of all donors and recipients

for the Rh factor will probably be routine in the future. It should prevent the development of sensitization and its hazards in many cases. Within the past months, anti-Rh testing sera have become widely available. A routine testing of all pregnant mothers for the Rh factor should be done, and all negative reactors should be tested for the antibodies.

## ARIZONA MEDICINE

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## Editorials

### The Council On Medical Service And Public Relations

The AMA Council on Medical Service and Public Relations held a meeting at the AMA headquarters in Chicago, October 19 and 20. Representatives from each State Medical Association were invited and many of the states accepted the invitation. The meeting was unique, in that the list of subjects were presented at 8 different round table discussions on the first day. At the end of the day resolutions were drawn up and presented to the general session on the morning of the second day. The Council was brought up to date on the present status of proposed legislation in the national capital. The Murray-Wagner-Dingell Bill which every one knows about and is interested in, rests in the Senate Ways and Means Committee. This committee has employed a group of experts to evaluate the financial possibilities of the bill. When the bill was introduced it was estimated that the levy of 4% on the employer and 4% on the employee would raise about 3 billion dollars a year.

These experts have estimated that it would cost between 15 and 17 billions a year to carry out the provisions of proposed legislation. It is the opinion of the Washington office of the Council that no action will be taken on the bill at this session of Congress.

The Hill-Burton Bill is the next important piece of Federal Legislation at this time. This is a bill to authorize grants to the States for surveying their hospitals and public health centers and for planning construction of additional facilities, and to authorize grants to assist in such construction. This bill is considered constructive legislation and if passed as it is originally proposed will be approved by the AMA. It sets up a State Advisory Council to make the survey and after the survey is completed any non-profit hospital, either public or private, is eligible to secure grants for construction. These grants will be outright and the hospitals will remain autonomous. Considerable doubt exists at this time as to whether these grants will be made to private institutions without some strings attached by the Federal government. Hearings have been held on the bill but it has not been reported out of committee.

A department which is receiving much favorable comment in Washington is the Office of Scientific Research and Development. This office was established by the late President Roosevelt, who appointed Dr. Vannevar Bush as director. Dr. Bush has presented a report on national policy. He points out that the cost of scientific research is too great to be carried out by private sources. He suggests that the government give financial support through outright grants to medical schools and universities for research and fellowships. A tentative figure for this program would be 33 million dollars the first year and would increase to 122 million by the fifth year. The Magnuson and Kilgore bills before Congress would deal with this legislation.

*Maternal Care*

While it seems at this time that the Wagner-Murray-Dingall Bill is stymied in Congress, there is grave danger of this proposed legislation being enacted piecemeal. When the Emergency Maternal and Infant Care Program was instituted in 1942 it was to end 6 months after the end of the emergency was declared. The medical profession predicted that its use merely a foot in the door for main socialization of medicine. In July of this year Pepper introduced S1318. This is the most dangerous and vicious bit of legislation before our national legislature. It is entitled "Maternal and Child Health Services." It would appropriate 50 million dollars the first year, and a sufficient sum each year thereafter to carry out the provisions of the bill.

*Controversial Discussions*

This section of the program brought the Council up to date on the status of national affairs and national legislation. The other round table discussions involved subjects which were much more controversial in character. They included Public Relations, Press and Radio programs, the E. M. I. C. program, Placement of Medical Officers, Medical Service Plans and their co-ordination with the Blue Cross. The problems involved in the latter subject consumed most of the afternoon of the first day.

While not many answers were reached concerning all these subjects, resolutions were drawn up at all the round tables and presented at the General Session on the morning of the second day.

The General Session decided to call another meeting of the Council on Dec. 2, the day before the AMA House of Delegates meet in Chicago, at which time they hope to have some very definite recommendations to make to the House. The various state representatives at the meeting were very favorably impressed by the frankness and sincerity of the Chairman of the Council, Dr. E. J. McCormick. He approached all problems with an open mind, and insisted that definite conclusions be reached and aggressive action be taken. It would seem that if frequent meetings, similar to this one, of this Council are held, a constructive policy for the American Medical Society will be formulated.

**A Tribute To A Country Doctor**

Spanish has a word for it—"Simpatico," simple, kind, human true. Perhaps you would be in Mexico on a fishing trip, and they would find you were from "Ah, Buckeye, eh? Como esta mi amigo, el Doctor? Que buen hombre es, que simpatico." They all loved him down there. Or perhaps you would be knocking around over most any part of the State; it would be, "How is my old friend the Doctor?"

Children loved him, children liked to be around him, and flowers liked to grow for him. Just now, in passing his home we saw a woman picking flowers from a vine he had planted.

And the dogs. He could walk along anywhere and if there were as many as three dogs in the neighborhood there would be three dogs following along by the time he got home.

He used to say that he had three things to be thankful for, three things at least. One that he was born white, two that he was born an American and three that he was republican in politics. Yet, white, black or in between we all looked alike to him and we all had the same good treatment from him. Also he would vote the other way as often as not.

Sometimes he would put on his good clothes and come down the street looking the cosmopolite he was, yet a stranger would not hesitate to ask him a local direction. That was how he was; he simply belonged and all could see it. He delighted in our simple pleasures as well as mourning with us in our misfortunes. We remember when he was being introduced by our Mayor at a local celebration, and the mayor described him as the best loved man in West Maricopa County. We wondered then why such narrow limits were set.

He was a good sportsman, a good man to know, a very fine gentleman and a friend.

There are Alice, the wife; Kenneth, Genevieve, Roland and Paul, the children; George, Roland, Jr., and Pamela, the grandchildren. There is too the whole community. Of course we loved him, because you see, he loved us.

*Buckeye News.***The Journal of Venereal Disease Information**

*Syphilis in Inductees. Analysis of 5,000 Cases.*

Jacob Zellermayer. *Journal of Venereal Disease Information*, Washington 26: 194-196 December, 1945.

A study evaluating the preliminary diagnoses of syphilis in a group of 5,000 inductees revealed that 11.4 percent of these inductees never had syphilis, 10.56 percent were possibly cured of their infection, 1.24 percent had primary syphilis, 0.14 percent secondary, 48.84

percent early latent, and 12.98 percent complicated syphilis, chiefly cerebrospinal.

Preliminary diagnoses were based on positive serologic tests, history of injection on therapy, history of penile or skin lesions, familial histories of syphilis, and miscellaneous other reasons.

In 1,510 inductees in which no evidence of active infection could be found at the time of evaluation, 37.7 percent were found never to have had syphilis, 35.0 percent had been adequately treated and were possible cures, and 27.3 percent had been inadequately treated or treated within the previous 6 months and were considered possible cases of latent infection.

In 570 men finally evaluated as never having had syphilis, positive serologic tests alone comprised the basis for the preliminary diagnosis of nearly 80 percent; a history of penile lesion, 16.0 percent; a history of injection therapy, 1.6 percent; miscellaneous other reasons, 2.8 percent, such as a doubtful positive Romberg, the presence or history of skin lesions or adenitis and familial histories of syphilis.

This group, found never to have had syphilis, is an excellent illustration of the necessity for careful diagnostic work in the field of syphilitotherapy. It constitutes 11.4 percent of the entire series, and contains 570 men who might well have been started on an arduous course of treatment in the absence of further investigation. It also raises considerable doubt concerning 167 men in the cured group who had been treated on the basis of positive serologically negatives but had had inadequate treatment. All of these facts emphasize the need for great care in establishing the diagnosis of syphilis.

Of the 528 men (10.56 percent) considered possible cures, 167 were originally diagnosed on the basis of serologic tests alone, so many of them may never have had syphilis. On the other hand, there were 412 men clinically and serologically negative who were classed as latent syphilis either because they had received inadequate treatment or because they had been receiving treatment within 6 months prior to evaluation. Thus there was a total of 940 men, 18.8 percent of the entire series, who, if their original diagnoses was correct, may have been cured; 84.1 percent of these had had more than 20 arsenical injections. Nearly half of the possibly cured cases had received regular treat-

ment compared with slightly over one-third of the latent cases. Even when those who had received less than 20 arsenical injections are taken out of the latent group, the remainder show a much lower average number of injections than do the possible cures. It is apparent that both regularity and amount of treatment are potent factors in bringing about serologic reversals.

No previous treatment had been given to 1,614 inductees with latent syphilis. This group constitutes 58.2 percent of the 2,772 seropositive latent cases. In other words, well over half of this group found to have positive blood tests but no other signs of syphilis were previously untreated and unknown cases. This illustrates the value of the serologic survey in finding cases of syphilis, provided caution is used and too much reliance is not placed on the results of a single test.

## From the Office of Surgeon General

### FACTS ON USE OF DDT

Since the proper use of DDT requires special knowledge and training, a bulletin has been published as a technical guide for the Army to its same and efficient use, Major General Norman T. Kirk, Surgeon General of the Army, announced today. The publication contains information on the precautions to be taken in handling DDT, its mode of action in insect control, and the proper methods of application of the DDT insecticide items issued by the Army.

It is emphasized that, although DDT may be safely handled as an insecticide, it is, nevertheless, a toxic material. Poisoning may occur from ingestion of DDT or by absorption of DDT solutions through the skin. DDT powder and aerosols are not absorbed through the skin, and have been found to produce no ill effects when inhaled in small amounts. However, in conditions where air currents do not carry away the dust from the user, it is wise to wear suitable respirators as protection against excessive inhalation.

DDT acts on insects both as a contact poison and as a stomach poison. Studies have shown that the poisonous effect of DDT on mosquito larvae is fully as powerful as that on the adult insect, although on some other insects, such as

flies, the larvae are not equally affected by the insecticide. In applying DDT as a mosquito larvicide to open water receptacles, a prolonged effect may be obtained because of the residual action of the chemical. However, in applying it to natural water bodies the effect is much shorter, due to the binding action of mud in the water, which apparently checks the effectiveness of DDT. It should also be considered that amounts of DDT greater than 0.2 pound per acre may prove fatal to fish and wild life. For extermination of insects such as ants, roaches, fleas, bedbugs and flies, DDT oil solution or powder should be used, with particular attention to cracks, holes, and seams in walls, floors, and bedding, as indicated. One of the most valuable characteristics of DDT lies in its tendency to remain deadly to insects over a prolonged period of time. In applying DDT solutions to walls and other large surface areas, a coarse spray is usually employed, but in applying it to screens or mesh surfaces, ordinary paint brushes may be used. Although the effectiveness of the treated areas against insects persists for some time, the insects which come in contact with the chemical may not die until an hour or more has elapsed, and immediate death should not be expected.

When applying solutions of DDT in kerosene, precautions concerning the inflammability of the kerosene should be observed. Care should be taken to keep electric motors and other sparking or heating apparatus from the zone of spray. No open fires or smoking should be permitted until the spray has dried and ventilation is complete. The kerosene in the solution is harmful to rubber equipment and may cause a mild skin irritation when in contact with the skin.

Thanks to the magic properties of DDT, many lives have been saved in this war and much disease prevented. Extermination of disease-carrying insects has reduced the incidence of typhus, malaria, and other ravaging diseases of the war areas.

Although rapid progress has been made in the development of DDT since it first made its appearance in the field of science, much remains to be learned before its full potentialities in insect control can be realized. Signs of progress are evident in the spraying of large areas by aircraft, the mass delousing of communities in Europe, and the better methods of manu-

facture. Investigation is continuing on every aspect of DDT, however, in search of new and extensive improvements in everything from its chemical beginning to its final application in the field.

#### *New Delousing Sets for Overseas Use*

More than 400 compact power-driven delousing sets, weighing only 180 pounds, but capable of dusting 600 persons an hour with DDT powder, have been put in operation overseas, according to a recent announcement by the Office of the Surgeon General.

The disruption of sanitary facilities in battle areas has promoted rapid breeding of disease-bearing vermin to such an extent that the situation requires prompt action to avoid epidemics.

Each individual to be treated must be dusted up the sleeves, down the neck, and inside the waist band with approximately 1½ ounces of DDT powder. This is a slow process with a hand duster, but the new delousing outfit, having ten hoses and nozzles, permits the rapid handling of ten persons at a time and is proving invaluable in holding disease in check in infected areas.

The delousing outfit was developed by the Quartermaster Corps in collaboration with the Office of the Surgeon General and the United States of America Typhus Commission.

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#### NEW SKIN DISEASE—ATYPICAL LICHEN PLANUS—ANNOUNCED

Studies of the occurrence of a new skin disease, which has been named atypical lichen planus and is known to the soldier as one of the varieties of "jungle rot," were recently announced by the Office of the Surgeon General.

Following the first Pacific island invasions, it became necessary to evacuate a growing percentage of men from battle areas of skin diseases which are common in the tropics. Soon after the beginning of the Buna campaign in early 1943, a number of patients with a similar skin disease which was unfamiliar was noted. Further observation made it evident that a new disease was being encountered.

The first Army reports containing descriptions of this new disease, which came to be called atypical lichen planus, were submitted by two Army dermatologists in the Southwest Pacific—Major Thomas Nisbet of Pasadena,

California, and Lt. Colonel Charles Schmitt of Pittsburgh, Pennsylvania. Major Nisbet and Colonel Schmitt believed that atabrine, the drug which proved of such exceptional aid in reducing malarial attacks, was probably the underlying cause of the disease.

Army doctors emphasize that the possible relationship of atabrine to atypical lichen planus does not reflect upon the usefulness of atabrine for the treatment of malaria. The skin disease has appeared only in about 2 or 3 per thousand of those in the Southwest Pacific who took atabrine regularly for some months. Atypical lichen planus apparently arises partly because of an unusual sensitivity to atabrine. Doctors are well acquainted with the fact that occasional individuals are sensitive to certain drugs such as quinine, the sulfa drugs, and even aspirin.

Although medical officers believe that atabrine is an underlying cause of the disease, they recognize that many other factors besides atabrine are probably contributory. These include skin injuries and irritations of many kinds, excessive exposure to sunlight, profuse perspiration, dietary deficiencies, and emotional and nervous factors. Older men have been found to be more susceptible than younger men, and the disease occurs among the nurses and WACs as well as among the men.

Medical officers soon learned to recognize atypical lichen planus in its early stages and are able to prevent it from spreading to other parts of the body. In all but a small percentage of cases the disease has cleared up under treatment. To relieve the public and the families of patients of unnecessary worry, Army doctors emphasize that atypical lichen planus is not contagious.

Atypical lichen planus gets its name from its resemblance to the well-known skin disease, lichen planus. The type of skin lesions in the disease differs with the patient. The disease usually first occurs in itchy, oozing, reddish or purplish patches on the skin. These patches may remain the same for several weeks or they may spread rapidly. Some patients develop a later stage in which raised scaly patches appear, often on the arms and legs.

Following the acute stage of the disease, the inflamed patches leave purplish or brownish areas and often cause a temporary closure of sweat glands with a consequent lowered heat

tolerance. In some cases patches of hair are temporarily lost.

Special mention should be made of some of the many medical officers in addition to Major Nisbet and Lt. Colonel Schmitt who have been carrying on scientific studies of this skin disease. Lt. Colonel John Ambler of Denver, Colorado, Consultant in Dermatology in the Southwest Pacific, collected extensive information on the many aspects of the disease; Major Abner M. Harvey of Nashville, Tennessee, and his associates contributed to the impression that atabrine was an essential cause; and Major Lawrence Katzenstein of Baltimore, Maryland, made some of the early observations of the disease.

#### TOTAL STREPTOMYCIN PRODUCTION ONLY FOURTEEN OUNCES A MONTH

The War Department said today that streptomycin, the new wonder sister drug to penicillin, was being used in thirty Army general hospitals over the country, but that it was so difficult to obtain that the total output of the four companies now making it has been only fourteen ounces a month.

Major General Norman T. Kirk, Surgeon General of the Army, said the Army was receiving many requests for the drug for use in treatment of urinary and other infections caused by gram-negative bacteria which do not respond to penicillin, but that these cannot be met since the Army neither controls the supply nor can get enough for its own needs in treatment of battle-wounded soldiers.

General Kirk said that the four companies, Merck, Upjohn, Abbott and Squibb, were the principal manufacturers of the new product, but that other concerns were working at experimental production at pilot plants and that any civilian request for streptomycin naturally would go to these companies.

"The Army and Navy are purchasing only a part of available production," General Kirk said. "In August, twenty-eight ounces—or 800,000,000 units—were purchased. Joint Army-Navy expectations for September are 162 ounces, but it is anticipated that production will be not more than 70 ounces. It is hoped that Army-Navy procurement can be doubled in October—for military needs alone now are about 2,000 ounces a month."

A gram, or 1,000,000 units is the standard

daily dose administered in three injections over a twenty-four hour period.

Production is limited severely because the drug is obtained from a natural fungus found in the soil and must be grown under carefully controlled laboratory conditions which cannot be hurried.

The phenomenal production of penicillin which brought it from a laboratory curiosity to a commonly-used drug and the price from astronomical figures to about a dollar a dose was due in part to pressure of wartime needs, the General pointed out.

"But," he added, "with the war ended and priorities a thing of the past, streptomycin does not have these advantages, thus working to some extent to hamper production, although industry is doing what it can do to supply the demand."

General Kirk explained that the Army's principal needs are for treatment of soldiers with severed spinal cords who develop urinary tract infections because of a loss of bladder function, and to some extent in treating some cases of meningitis and other infections which do not respond readily to penicillin therapy.

#### SIX PROJECTS FOR IMPROVEMENT OF ARTIFICIAL LIMBS

An intensified program for the improvement of artificial limbs which involves six separate projects will be undertaken by the Army in co-ordination with the National Research Council, according to an announcement by Major General Norman T. Kirk, Surgeon General of the Army.

In February of this year the National Research Council through its committee on Prosthetic Devices, which comprises some of the country's outstanding scientists, started work on the problem of providing better arms and legs for amputees. Co-operating with this committee are the Veterans Administration, Navy, Army, National Bureau of Standards, Federal Security Agency and engineers from some of the nation's top industrial concerns.

The research activities of the Committee on Prosthetic Devices will continue along the same lines but the Army will give further co-operation in certain additional phases of the program. The plan of Army scientists is to complement what is being carried on under the National Research Council auspices.

The Army will conduct its research work at Army General Hospitals which are amputation centers. The presence in these hospitals of orthopedic surgeons who are handling these amputation cases and the clinical evaluation possible under such circumstances is expected to prove of definite value.

The aim of both projects is the general improvement in the quality of artificial limbs, more standardization of parts and the facilitation of production and fitting.

The six phases of the program in which the Army will devote its efforts include:

1. Further development and improvement of knee assembly and ankle assembly.
2. Investigation of materials for producing a cosmetic hand or for covering a mechanical hand.
3. Evaluation of usefulness of plastics in sockets or limb sections.
4. Broad study of metals and alloys used in fabrication of artificial limbs.
5. Investigation of fabrics and techniques of manufacture and fitting for prostheses at or below the ankle.
6. Production of a motion picture record of the Army amputation and prosthetic program.

Private industry will play an important part in this program. The Committee on Prosthetic Services of the National Research Council contracts with individual concerns for basic research which is carried on in the laboratories of the company contracted.

Northrup Aviation Company in California has done an outstanding piece of work in the improvement of a rotary wrist mechanism which gives an arm amputee far better use of the artificial hand. This work has been done in collaboration with Bushnell General Hospital at Brigham City, Utah.

The government authorizes payment for all expenses under these contracts and the Army through its amputation centers will afford every possible means of co-operation.

The War Department hopes to broaden this aspect of the project by enlisting the help of more industrial concerns which have the laboratory facilities to engage in such work.

An appropriation has been authorized sufficient to continue this Army project as long as the Surgeon General expects to have amputee cases in Army General Hospitals. There have been about 14,000 amputees in Army General

Hospitals in this country since the beginning of this war. Of this total there are now about 8,300 amputees who are in the six amputation centers in Army General Hospitals.

Five percent of these cases represent battle veterans who have two arms or legs or one arm and one leg, nine are triple amputees and only two men have lost both hands and both feet. Approximately 95 percent are men who have suffered the loss of one limb.

#### GENERAL RANKIN IN TALK TO THE UNIVERSITY OF MICHIGAN ON WORK OF ARMY SURGEONS

A major factor in the Army's record of saving the lives of almost ninety-seven out of every hundred wounded men who reached a hospital was the quality of surgical care given these soldiers, Brigadier General Fred W. Rankin, Chief Consultant in Surgery of the Army Medical Department, told the graduating class of ASTP and V-12 students at the University of Michigan School of Medicine on September 15 at Ann Arbor, Michigan.

The lowered mortality rate in this war also was achieved because the highly qualified surgeons did their work without loss of time and also because hospital facilities staffed by specialists were placed near the front.

General Rankin said the average wounded man received his initial surgery at an evacuation hospital within ten hours of the time of his injury.

"In carefully selected cases," General Rankin added, "in which surgery was done at field hospitals the average time lapse was considerably less."

The efficient operation of the Army chain of evacuation made this possible. It starts at the time a man is wounded, and it is usually only a matter of a few minutes before the Medical Corpsman gives emergency treatment.

General Rankin explained that the Army's accomplishments were possible partly because of the method of assigning qualified specialists and also to the dissemination of information through the Consultants Division as to the best methods to be used under certain circumstances.

"The general principles of wound management were two-fold; initial debridement and delayed wound closure," the General continued. "The use of this method in the Mediterranean

Theater of Operations resulted in primary healing in 95 per cent of the cases in which it was used and was attended with no loss of life or limb and with no serious complications."

Improved techniques reversed the ration of deaths and survivals in abdominal injuries as compared with that of the last war. About sixty per cent of the casualties in the last war were fatal, while in this war sixty per cent of such casualties survived.

The so-called early nerve suture resulted in regeneration in eighty-five per cent of the cases in this war, according to the General. Another notable accomplishment in this war has been the reduction in the mortality rate in the dangerous cases, or the head, chest and abdomen wounds, which is only half as high as during the last war.

Reconstructive and rehabilitative surgery designed to correct the disfiguring consequences of battle wounds is achieving results "that can fairly be termed miraculous," General Rankin said.

#### NEUROPSYCHIATRIC DISCHARGES IN ARMY NOW TOTAL 315,000

The nation's total of soldiers who have been discharged from the Army for neuropsychiatric reasons has now reached 315,000, Brigadier General William C. Menninger, Director of the Neuropsychiatry Consultants Division at the Army Medical Department, said in a recent talk before the New York Academy of Medicine.

Describing this problem as a "post war challenge to medicine," General Menninger expressed the hope that "physicians will prepare themselves to accept and treat what the Army medical officers discovered were among their biggest problems—the emotional factors in the production of illness."

"With this understanding on the part of the physician," General Menninger said, "treatment must be directed towards integrating the individual into his pre-war identifications and satisfactions."

On the basis of the Army's experience with neuropsychiatric cases, which are referred to as combat exhaustion or combat fatigue, only about three to five per cent of the soldiers suffered reactions due entirely to fatigue. The condition of the great majority was primarily

a personality disturbance and treated as such, he explained.

Upon induction into the Army a soldier faces an entirely different life which in certain cases produces sufficient stress in the individual to bring him to the psychiatric breaking point.

"Frustration," he pointed out, "was a daily part of the soldier's life, sometimes in the form of waiting days, weeks, months, sometimes in the deprivation of essential supplies.

Confusion was routine in his life and the noise and whistles and flares of battle are beyond the imagination of anyone who has not heard and seen them."

General Menninger said that essentially the response is the same when an individual fails to adjust himself to his situation in civilian life as it is when he finds he cannot meet the demands of Army life.

#### EXCERPTS FROM THE WORKMAN'S COMPENSATION LAW

The following is Section 56-957 of the Workmen's Compensation Law, outlining scheduled injuries under Sub-section (b) and general disability under Sub-sections (c) and (d):

"Sec. 56-957. Partial Disability. (a) For temporary partial disability there shall be paid during the period thereof, not to exceed sixty months, sixty-five per cent of the difference between the wages earned before the injury and the wages which the injured person is able to earn thereafter.

(b) Disability shall be deemed permanent partial disability if caused by any of the following specified injuries, and compensation of fifty-five per cent of the average monthly wage of the injured employee, in addition to the compensation for temporary total disability, shall be paid for the period given in the following schedule:

1. For the loss of a thumb, fifteen months.
2. For the loss of a first finger, commonly called the index finger, nine months.
3. For the loss of a second finger, seven months.
4. For the loss of a third finger, five months.
5. For the loss of the fourth finger, commonly called the little finger, four months.
6. For the loss of a distal or second phalange of the thumb or the distal or third phalange of the first, second, third, or fourth finger, shall be considered equal to the loss of one-half of such thumb or finger, and compensation shall be one-half of the amount specified for the loss of the entire thumb or finger.
7. The loss of more than one phalange of the thumb or finger shall be considered as the

loss of the entire finger or thumb, but in no case shall the amount received for more than one finger exceed the amount provided for the loss of a hand.

8. For the loss of a great toe, seven months.

9. For the loss of a toe other than the great toe, two and one-half months.

10. The loss of the first phalange of any toe shall be considered equal to the loss of one-half of such toe and compensation shall be one-half of the amount for one toe.

11. The loss of more than one phalange shall be considered as the loss of the entire toe.

12. For the loss of a major hand, fifty months, or of a minor hand, forty months.

13. For the loss of a major arm, sixty months, or of a minor arm, fifty months.

14. For the loss of a foot, forty months.

15. For the loss of a leg, fifty months.

16. For the loss of an eye by enucleation, thirty months.

17. For the permanent and complete loss of sight in one eye without enucleation, twenty-five months.

18. For permanent and complete loss of hearing in one ear, twenty months.

19. For permanent and complete loss of hearing in both ears, sixty months.

20. The permanent and complete loss of the use of a finger, toe, arm, hand, foot or leg may be deemed the same as the loss of any such member by separation.

21. For the partial loss of use of a finger, toe, arm, hand, foot, leg or partial loss of sight or hearing, fifty per cent of the average monthly wage, during that proportion of the number of months in the foregoing schedule provided for the complete loss of use of such member, or complete loss of sight or hearing, which the partial loss of use thereof bears to the total loss of use of such member or total loss of sight or hearing.

22. For permanent disfigurement about the head or face, which shall include injury to or loss of teeth, the Commission may allow such sum for compensation thereof as it may deem just, in accordance with the proof submitted, for a period not to exceed eighteen months.

(c) In cases not enumerated in subsection (b), where the injury causes partial disability for work the employee shall receive, during such disability, compensation equal to fifty-five per cent of the difference between his average monthly wages before the accident and the monthly wages he is able to earn thereafter, but the payment shall not continue after the disability ends, or the death of the injured person, and in case the partial disability begins after a period of total disability, the period of total disability shall be deducted from such total period of compensation.

(d) In determining the percentage of disability, consideration shall be given, among

Hospitals in this country since the end of this war. Of this total there are 8,300 amputees who are at present receiving treatment centers in Army General

Five percent of these veterans who have two arms and one leg, nine are two men have lost both legs.

Approximately 95 per cent of these

suffered the loss of one or more fingers or thumbs, but in no case has a great toe, seven months after the loss of one-half

#### GENERAL RIGOR, ENTIRE TOE,

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Whereas, if the attending physician signed his report on the 10th and the claimant was then brought before the board on the 16th, and the board found that he was ready to return to light work, but should have a period of 3 to 6 months in which to condition himself in order to be able to resume his regular work, then this type of report would put the Commission in a position to issue a temporary partial award, based upon the consultant board's report allowing claimant this reconditioning period. However, if the consultant board says that claimant's condition is stationary and needs no further medical treatment, then the Commission has no authority to put him on a temporary partial basis for a period of 3 months or so during which time claimant could get himself into a position to resume work.

If the consulting board would say that the claimant was ready to return to light work but should be given a readjustment period of 3 or 4 months, at the end of which period he should be brought before the board for examination. This would be an enormous help to the Commission many of the general disabilities to work more promptly.

#### M TREATMENT OF HYPERPLASTIC LYMPHOID TISSUE IN THE NASOPHARYNX

ALBERT E. FISHER, M. D., F. A. C. S.

of Otolaryngology and Bronchoscopy, University of Alabama Medical College, Birmingham, Alabama

In previous communications (1), (2), the author has endeavored to stress the importance of the use of radium in the treatment of hyperplastic lymphoid tissue located in the nasopharynx.

Infection and hyperplasia in the nasopharyngeal lymphoid tissue is of such great importance as an etiological factor in systematic disease, that it should warrant our most careful attention and consideration. This tissue plays an exceedingly important role in otolaryngology as it most certainly is the primary focus for pyogenic infections occurring in the upper air passages. Primary infections in this tissue extend to the sinuses, ears, larynx, trachea and bronchi; producing, in uncontrolled cases, otitis media, mastoiditis, deafness, chronic bronchitis, and bronchial asthma.

It has been conclusively proven by Heinlke<sup>3</sup> and Akaiwa and Takeshima<sup>4</sup> that the lymphoid tissue is exceedingly sensitive to radiation, and marked reduction in its size can be produced by this method of therapy.

Dr. S. J. Crowe and his associates, working in the Johns Hopkins Hospital, have found radium so valuable in reducing the size of hyperplastic nasopharyngeal lymphoid tissue, that this method of therapy is now used routinely as an adjunct in the treatment of mouth breathing, recurrent nasopharyngitis, impairment of hearing due to tubo-tympanic catarrah, suppuration of the ears, infection of the accessory nasal sinuses and asthmatic bronchitis. They found, in studying 1365 school children between the ages of 8 and 13 years, that more than 75% had a marked recurrence of the lymphoid tissue in the nasopharynx following tonsillectomy and adenoidectomy. I would like to stress that this was not due to an incomplete operation, but to the fact that the lymphoid tissue is an integral part of the mucous membrane, and thus cannot be removed entirely by surgical means<sup>5</sup>.

Repeated infections of the upper respiratory tract result in hyperplasia of the lymphoid tissue. This produces excessive secretion of mucous obstruction to breathing and the eustachian tubes, and the persistent lowering of resistance of the patient to infections. In older children this results

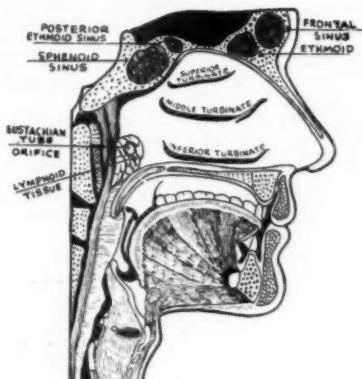


Figure I—Sagittal section of head showing in a rough manner the approximate location of the nasopharyngeal lymphoid tissue, and its relation to the eustachian tube orifice.

in the so-called "granular pharyngitis," and continued infection in this tissue produces the commonly recurring nasopharyngitis and pharyngitis seen in adults. Long standing partial or complete obstruction of the eustachian tubes is the commonest cause of conduction deafness. Therefore, it behooves us to keep in mind the facts proven by the above mentioned investigators and treat this nasopharyngeal lymphoid tissue by means of irradiation as often as necessary to cause its atrophy and obliteration.

Crowe states, "Infected and hypertrophied adenoid tissue should always be removed surgically. The combination of operation and irradiation, or irradiation alone, prevents recurrences or reduces the size and susceptibility to infection of the recurrent nodules of lymphoid tissue in the nasopharynx and pharynx. If radiation is employed, the otolaryngologist must realize that it does not destroy or permanently remove the adenoid tissue. It merely slows up, or for a time stops the reproduction of lymphocytes and in this way causes a gradual decrease in size. Usually two or three treatments are necessary to obtain the desired results, and they may have to be repeated once or twice each year until a child reaches the age of puberty. After this period there is a spontaneous regression of lymphoid tissue in the upper air passages in most children". However, it has been the author's observation that lymphoid tissue in the nasopharynx and pharynx, untreated by irradiation during childhood, persists in the adult; as he has observed several hundred adults who have undergone tonsillectomy under local anaesthetic to have a huge mass of persistent nasopharyngeal lymphoid tissue completely obstructing the eustachian tube orifices and filling the nasopharynx. This observation should not keep one from performing tonsillectomy under local anaesthetic where indicated, but should remind us that there is nasopharyngeal lymphoid tissue still intact which should receive radiation therapy, as it is a persistent site of infection.

During the past five years, the writer has examined with the electric nasopharyngoscope, and treated with radium, over 1000 patients whose nasopharynx and pharynx harboured hyperplastic and infected lymphoid tissue. Over one half of these patients were originally treated with a 50 mgm. radium applicator. The applicator had a platinum capsule 0.5 mm. in thickness. The capsule was attached to a copper wire 17.5 cm. in length. The capsule and wire were covered with a coating of gum rubber 0.7 mm. in thickness. Recently a new applicator designed by Burnam and Crowe of Johns Hopkins, has been sulfate. The absorption capacity of a filter is proportional to its density. To absorb all Beta rays only 0.5 mm. of platinum, gold or tungsten is required; obtained which has aided considerably in results produced as well as diminishing the time of application. The active part of the new applicator is a monel metal tubular chamber 15 mm. in length, with an inside diameter of 1.7 mm., a wall thickness of 0.3 mm. and an outside diameter of 2.3 mm. The chamber contains 50 mgm. of radium, 1 mm. of lead or silver; 2 mm. of brass or monel metal and 10 mm. of aluminum. Even when all primary Beta radiation is absorbed there is a secondary Beta and Gamma radiation from the filter, which is most penetrating from metals of high density. This secondary radiation is not large from monel metal, and for the treatment of the nasopharynx, with this applicator a secondary screen of lighter material is not necessary.

The dosage that has been found most effective with this applicator is 8.5 minutes in each side of the nasopharynx. Usually treatments are given at 25-day intervals and as a rule three treatments four or five may be necessary.

The author uses the following method of application: A 1% solution of cocaine is lightly sprayed into each inferior meatus. A cotton tipped applicator, moistened with three drops of 5% cocaine, is then gently passed along the floor of each in-

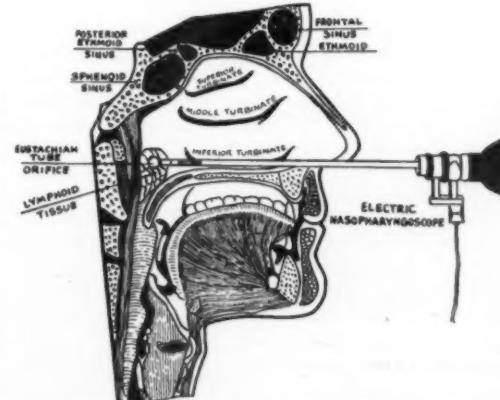


Figure II—Demonstrates the electric nasopharyngoscope in place in the inferior meatus. This electric telescope gives one a clear, concise, absolutely accurate picture of the nasopharynx and its contents.

other things, to any previous disability, the occupation of the injured employee, the nature of the physical injury, and the age of the employee at the time of the injury. In case there is a previous disability, as the loss of one eye, one hand, one foot, or otherwise, the percentage of disability for a subsequent injury shall be determined by computing the percentage of the entire disability and deducting therefrom the percentage of the previous disability as it existed at the time of the subsequent injury.

(e) The commission may adopt a schedule for rating permanent disability and reasonable and proper rules to carry out the provisions of this section. (R. C. 1928, § 1438e, as added by Laws 1939, c. h. 28 § 11, p. 53)."

A claimant with a back injury whose injury has been prolonged for a period of, let us say, 9 months, or a year, or more, usually needs a period of time for reconditioning himself in order to be able to return to light work or to resume his usual employment. Therefore, the attending physician sends in claimant's Form No. C-413 on the 10th day of the month that he is totally disabled, and possibly on the 11th or on the 16th, the man is brought before a consulting board, of which his attending physician is a member, and the board makes a report saying that the claimant's condition is stationary and he needs no further medical treatment and is able to return to light work or his usual work. When the Commission receives this report, the question which undoubtedly would arise is, "If claimant was totally disabled on the 10th of the month, and was then examined by a consulting board on the 11th or 16th, how could his condition change so rapidly, allowing him to return to work?"

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If the consulting board would say that the man was ready to return to light work but should be given a readjustment period of 3 or 6 months, at the end of which period he should again be brought before the board for examination, it would be an enormous help to the Commission in getting many of the general disability cases back to work more promptly.

#### THE RADIUM TREATMENT OF HYPERPLASTIC LYMPHOID TISSUE IN THE NASOPHARYNX

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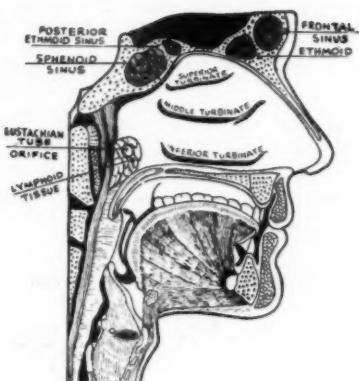


Figure I—Sagittal section of head showing in a rough manner the approximate location of the nasopharyngeal lymphoid tissue, and its relation to the eustachian tube orifice.

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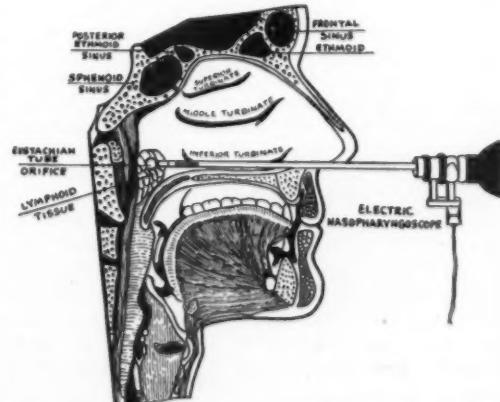


Figure II—Demonstrates the electric nasopharyngoscope in place in the inferior meatus. This electric telescope gives a clear, concise, absolutely accurate picture of the nasopharynx and its contents.

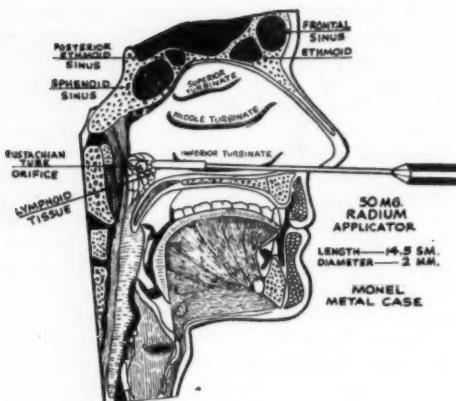


Figure III.—Radium applicator shown in position. This illustration is not completely accurate, as in actual application, the central point of the radium capsule lies adjacent to the eustachian tube orifice.

ferior meatus. After an interval of five minutes, the radium applicator is inserted through the inferior meatus into the nasopharynx. An electric nasopharyngoscope is then passed along the opposite inferior meatus to see, under direct vision that the radium capsule is in its proper place at the orifice of the eustachian tube. The applicator is then left in place for 8.5 minutes, after which time it is removed and a similar treatment is given the opposite side of the nasopharynx.

During the first week following the treatment, there may be a slight subjective sensation of "stuffiness" or "fullness" in the nasopharynx, accompanied by a moderate increase in the amount of post-nasal discharge. This is followed by a diminution in the amount of post-nasal discharge, so that 30 days following treatment very little if any discharge is noticed. Examination of the nasopharynx, six weeks after treatment usually reveals definite diminution in the size of the lymphoid tissue, as well as a marked decrease in the amount of tenacious mucoid discharge.

The results obtained in treating deafness, particularly in children, associated with mal-function of the eustachian tubes; recurrent acute upper respiratory infections, especially those beginning with irritation in the nasopharyngeal lymphoid tissue; recurring attacks of otitis media; bronchial asthma, particularly in children; aero-otitis; tinnitus and vertigo, in selected cases; and chronic obstruction of the posterior nares in children by this method, have been uniformly good and exceedingly encouraging. There have been failures in approximately 11% of the cases thus treated, but I am certain that where failure of the desired end result has occurred, it was because I failed to give a sufficient number of treatments. This method of eradicating hyperplastic nasopharyngeal lymphoid tissue is easily and painlessly administered, causes no ill effects or loss of time from ones work, and is highly recommended as

an adjunct in the elimination of a certain focus of infection.

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(Reprint from Mississippi Valley Medical Journal)

#### PLAQUE AUTHORITY SAYS LEPROSY IS NO LONGER A HORROR DISEASE

Approximately 400 persons in the United States are suffering from leprosy, one of the oldest of known diseases, and N. E. Wayson, M. D., noted plague authority in the U. S. Public Health Service, says that in view of modern medical concepts it is folly to associate horror and superstition with the disease.

Writing in the September issue of *Hygeia*, the magazine of the American Medical Association, Dr. Wayson says that "the condition of nearly all patients improves definitely within a short period after entering a well conducted hospital. An increasing percentage of patients in these hospitals are discharged as arrested and return to their home environments and useful occupations."

Dr. Wayson, who once served as director of the Leprosy Investigation Station in Honolulu, says that leprosy is now considered an infectious disease, caused by a germ or micro-organism which enters the body through either the nose or throat or skin and may be distributed throughout all the tissues of the body.

"This particular bacterium," the article said, "can be found in the tissues in various forms of the disease and has been accepted as its cause for that reason, although it is not discovered every lesion (wound) or tissue change appearing during the course of the disease. However, at present there is no accepted proof that this bacterium has ever been grown in test tubes in the laboratory, nor that the disease has been produced artificially in man or in lower animals by inoculation."

"The onset of leprosy is insidious and without a characteristic evolution which permits determination of the time it invades the body, nor the length of time it has been incubating in the tissues before it becomes evident.

"Bones of the fingers or toes may soften, shrink or even break spontaneously. When acute inflammation occurs in and around nerves, severe pain is produced, but leprosy is otherwise a relatively painless condition."

Dr. Wayson points out that the course of the disease may be short or it may continue for as many as 50 years. Arrest may come in the early stages, or later.

"Only a relatively small percentage of leprous persons can be said to die of leprosy," he said. "A large proportion die because of intercurrent affliction. Many die of tuberculosis and disease of the kidneys.

"So far as is known, leprosy is communicated directly from those in whom the disease is active, and not from those who have had it and have recovered, even though they are crippled and scarred. . . . The conclusion is reached that leprosy is not easily communicated from the sick to the well. Under conditions which are favorable to the communication of leprosy, as high a percentage of children of a household may contract the disease as would contract tuberculosis under conditions conducive to its spread.

"Hygiene and treatment which contribute to the support and well-being of the patient are beneficial in practically all cases. Measures which restrict or eliminate association with well people, and particularly with children, reduce the likelihood of the occurrence of new cases."

*Reprinted from A. M. A. News, Sept 6, 1945.*

## DOCTORS AND HOSPITALS

Anyone endeavoring to speak on the future relationship of physicians and hospitals needs to be a bit of a seer. I am not sure that prophesying is exactly my specialty, but I do foresee a change, for existing association is not good enough to meet the problems of the future. There must be mutual trust and understanding and neither group must attempt to dominate the other.

By the very nature of his profession the physician is an individualist trained to think for himself. By the same token he is jealous of his rights, and rightly or wrongly, resents what may appear to be infringement of them. On the other hand, the numerous and difficult problems of hospital administration quite often are not fully understood by the physician, and this leads to his misinterpretation of the hospital's motives. Our differences hardly constitute a problem and are readily correctible by conferences and discussion to promote better understanding of our real problems.

We must remember that we both have the same interests and motives and that one cannot get along without the other. Today we are working in the right direction, and medicine and hospitals are willing to co-operate with any group that will work with it in solving the immense problems facing us. If we are to maintain the private system of medicine, the full co-operation of the hospital group, the medical profession, the nurses and those companies writing non-profit medical and hospital insurance is absolutely essential.—

*William B. Rawls, M. D., in Bull. Med. Soc., County of Kings.*

## Directory

### ARIZONA STATE MEDICAL ASSOCIATION Organized 1895 423 HEARD BUILDING, PHOENIX, ARIZONA

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| Jesse D. Hamer, M. D. (1946)     | Phoenix  |
| Delegate to A. M. A.             |          |
| D. F. Harbridge, M. D. (1945)    | Phoenix  |
| Chairman, Medical Defense        |          |
| District Councilors              |          |
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| Central District                 |          |
| A. C. Carlson, M. D. (1946)      | Jerome   |
| Northern District                |          |
| Hal W. Rice, M. D. (1948)        | Bisbee   |
| Southern District                |          |
| Councilors-at-Large              |          |
| Dan L. Mahoney, M. D. (1948)     | Tucson   |
| O. E. Utzinger, M. D. (1947)     | Ray      |
| E. Payne Palmer, M. D. (1946)    | Phoenix  |

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**Tuberculosis Control**—James H. Allen (1947), Prescott; Samuel H. Watson (1946), Tucson; E. W. Phillips (1945), Phoenix. Non-Scientific

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**Editing and Publishing**—Jesse D. Hamer (1945), Chairman, Phoenix; A. L. Lindberg (1946), Tucson; Walter Brazie (1947), Kingman.

**Industrial Relations**—Meade Clyne, Tucson; James Lytton-Smith, Phoenix; A. C. Carlson, Jerome; O. E. Utzinger, Ray; John W. Pennington, Phoenix; C. E. Yount, Prescott; Frank J. Milloy, Secretary to Committee.

**Medical Defense**—D. F. Harbridge, Chairman (1945), Phoenix; A. C. Carlson (1946), Jerome; John W. Pennington (1947), Phoenix.

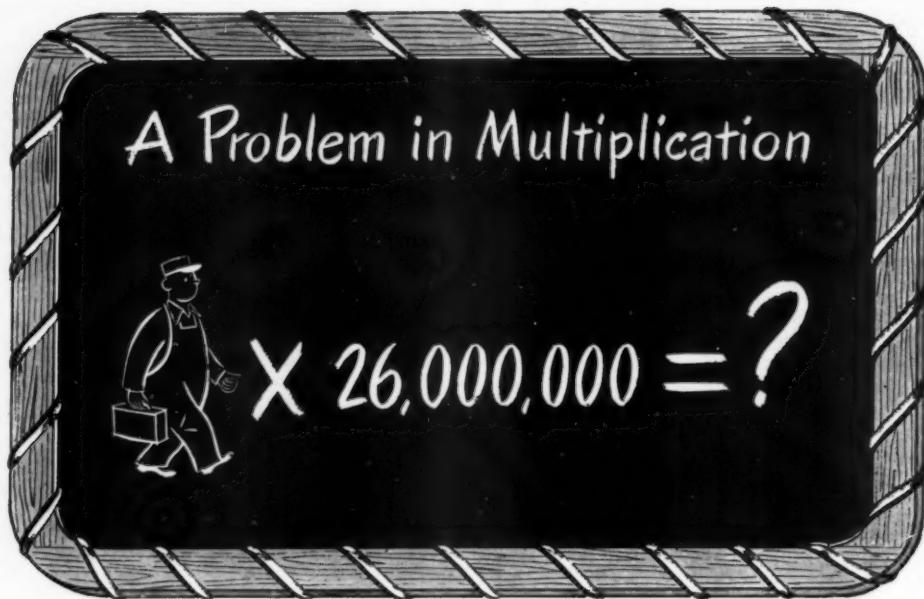
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**Public Health Education**—H. L. McMartin (1947), Phoenix; J. S. Gonzales (1946), Nogales; Paul H. Case (1945), Phoenix; Geo. O. Bassett (1945), Prescott.

**Public Policy and Legislation**—Charles A. Thomas (1947), Tucson; Walter Brazie (1946), Kingman; Jesse D. Hamer (1945), Phoenix.

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\* Terms expiring in 1945 will hold until 1946.



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(See: Note below) per each associate member.

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each county member and remits same to  
the association as per above.

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payment of dues while in the service pro-  
vided they were members in good stand-  
ing at the time they entered service. On  
returning to practice, dues are again  
payable.

MEMBERSHIP WITH THE AMERI-  
CAN MEDICAL ASSOCIATION....An active member of the state associa-  
tion automatically becomes a member of  
the American Medical Association with-  
out remittance of dues to that organiza-  
tion.

FELLOWSHIP WITH THE AMERICAN  
MEDICAL ASSOCIATION.....A member of the American Medical As-  
sociation wishing to become a Fellow of  
the same organization, makes direct ap-  
plication to the American Medical As-  
sociation and upon acceptance by that  
organization and the payment of Fellow-  
ship dues, direct to the American Medi-  
cal Association, receives fellowship cre-  
dentials.

NOTE: An Active Member of the Arizona Medical Association is licensed in the state and  
engaged in private practice. An Associate Member is one not licensed to practice  
in the state and is engaged in some branch of the federal service—Indian Service,  
Veterans' Administration, researchist, teacher, or the like—and not engaged in pri-  
vate practice.

**BRONZE STAR MEDAL AWARD**

The War Department has just announced the following award of the Bronze Star Medal:

*Arizona*—Captain Merle M. Musselman, MC, Tucson.

**MEDICO - LEGAL SECTION**

**Industrial Insurance:** The Industrial Commission has final word over Medical Advisory Board on question of continued disability.

**IN THE SUPREME COURT OF THE STATE OF ARIZONA**

**MORGAN, J.:**

This a rather extraordinary case. There is no contest as to the actual facts. Petitioner, a man about 53 years of age, weighing 114 pounds, a painter by profession, was injured while in the employ of the respondent A. E. Wensel, on April 13, 1942. In the process of lifting and moving a 70 pound ladder he lost his balance. In an effort to prevent the ladder from falling on a window of the house, he severely wrenched or strained his back, the immediate effect being a sharp pain in the lower part of his back. He completed his work

that day with considerable difficulty. He was bedridden for some time, and was thereafter unable to work. It is conceded that since the date of the injury he has not been able to perform any manual labor which entails in any way the use of his back.

The accident was not reported to the Commission until August 17, 1942. Later that year a formal claim was filed. Petitioner was awarded compensation totaling \$2,102.47 for the period August 17, 1942, to November 29, 1943. During all of the year 1943, up to November 8th, the petitioner was under the care and observation of doctors whose services were paid for by the commission. The only objective symptoms discovered were a very narrow disc space between the vertebral body and base of the sacrum, causing them to be almost in contact, and a condition described as fascitis, an inflammation of the tissues covering the left buttock muscles of a cordlike character. Either of these conditions could have resulted from the trauma (pressure) and strain (tearing) incident to the injury. The subjective symptoms were continual pain and tenderness in the region of the lower vertebrae on the left side and the left buttock. Various tests applied

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rule out any possibility that petitioner's condition was the result of any disease, infection, constitutional or postural defect. Prior to the accident he had never suffered from backache, had sustained no injury and lost no time. He was not malingering.

On November 8, 1943, the medical advisory board examined the petitioner, they filed a report as of that date finding the medical facts substantially as above set forth. Their conclusion was, "As a result of our examination it is our opinion that any disability he may have suffered as a result of his accident has terminated."

Based upon the opinion of the board, the commission stopped compensation. Petitioner protested. On October 20, 1944, he was given a rehearing. He produced numerous witnesses of unquestioned veracity, several being ministers, who testified that from the period November 29, 1943, up to the date of rehearing the petitioner continued totally disabled. It is admitted that reports of the commission's own investigators confirmed this fact. The petitioner was without means to employ medical experts to report on his condition. The commission did not have him examined by its own doctors or experts after November 8, 1943.

On November 20, 1944, the commission confirmed its award of the previous year, and found that the petitioner had no disability as

a result of his injury from and after November 29, 1943. Through the usual certiorari proceedings this award comes before us. This court has uniformly held that where the order of finding of the commission is based on reasonable evidence, it will be upheld. The only evidence in the record which supports the commission's order is the conclusion of the medical board, as made on November 8, 1943. The sole question is, does this conclusion afford reasonable evidence to support the award. If it does not, the case must be reversed and the order set aside.

In the late case of Hoffman v. Brophy, (Ariz.) 149 Pae. (2d) 160, we pointed out that the commission was under a statutory duty to determine the extent of industrial disability. Thus, where the medical board made a finding that a man was physically disabled twenty-five percent, that this did not mean he was disabled only to that extent industrially. Obviously, a twenty-five per cent physical disablement might, and in many cases does, have the effect of preventing the person so disabled from following his usual occupation, or being employed at any manual labor. In such case the injured person would have an industrial disability of one hundred percent. The Hoffman decision has application here. It is for the commission, not the medical board, to determine whether or not disability has ceased. The

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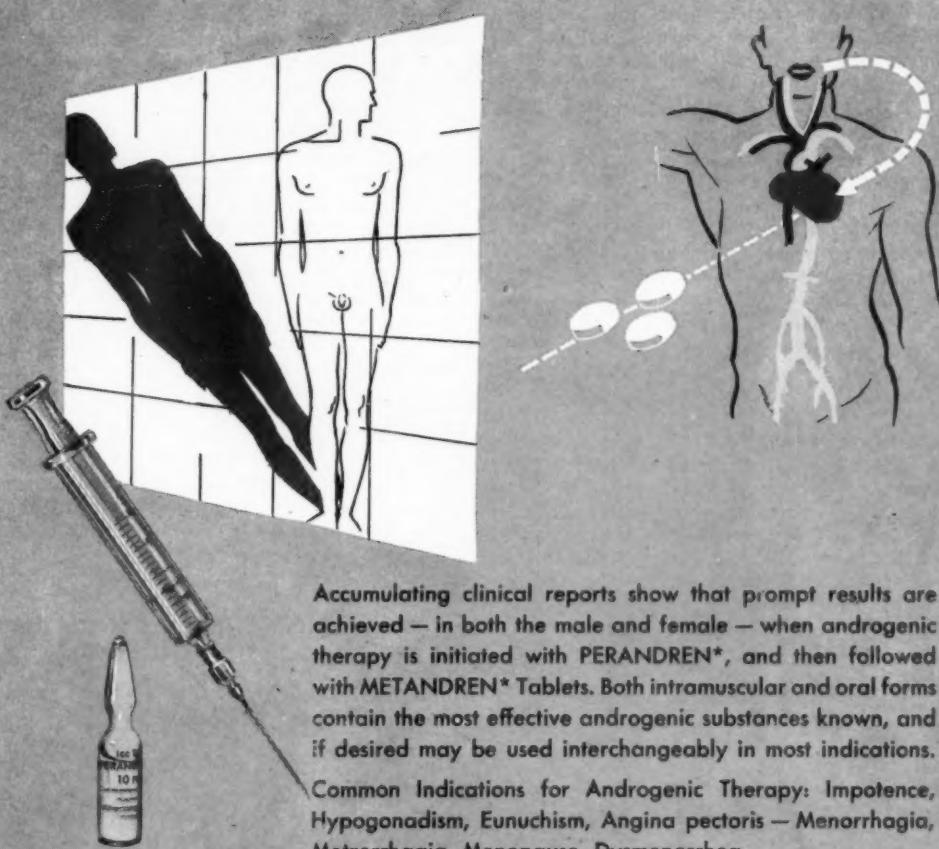
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commission should, and must, give due weight and consideration to the medical board, but it is not bound by its conclusions, particularly where the conclusions are wholly unsupported by the actual facts, or, as here, contrary to the medical history and findings. It is the medical findings rather than the conclusion which constitute evidence. Obviously, the conclusion or opinion which is counter to the actual facts or findings, and which on the face of the record is illogical and without support, cannot be treated as reasonable evidence.

We have carefully read the report of the medical board. As already observed, the various examinations made by competent doctors disclose that petitioner's disablement is not the result of any disease, infection or other natural defect. There was no improvement in his condition; he had the same tenderness; the condition described as fascitis still existed. There is no showing that the narrow disc space between the vertebral body and base of the sacrum had become normal. The petitioner was still disabled. There is nothing to indicate from the record that petitioner's condition was from any cause other than that which might well have resulted from his injury. The report is replete with showings that petitioner's condition was not the result of any disease or other like cause, but there is no finding in the report that his condition was not caused by, or

was the result of, the injury. From the board's own report we can find no support for its conclusion and are, therefore, constrained to hold that no reasonable evidence exists in support of the commission's findings.

In fairness to the commission we add that its reliance on the medical board's conclusion may have been induced by misunderstanding of former expressions of this court pertaining to the weight of medical opinion in certain cases. We note that the referee at the rehearing called attention repeatedly to the fact that the petitioner had produced no medical evidence. His financial status did not permit him to employ doctors. This, however, should not deprive him from consideration. In the final analysis, it was the commission's right and duty to determine whether or not the petitioner's disability had ceased or was continuing. The decisions which may have caused the commission to follow the conclusion of the medical board to the exclusion of the admitted facts when properly considered have no application to the situation existing in this case.

In *Ison v. Western Veg. Distributors*, 48 Ariz. 104, 59 Pae. (2d) 649, this statement was made: "Like most cases, where the injury is not an immediate and patent one, such as the loss of a member or a broken limb, the question of causal relation between the accident and the disability depends upon expert medi-

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cal testimony." It will be noted that this is not a rule of general application, but it applies in "most cases." In that case the commission had the testimony of two experts who differed as to the causal relation between the accident and the disability. One took the position that the condition of the applicant was a result of the injury. The other ascribed his condition to natural causes wholly unrelated to the injury. There is no such showing or difference of opinion in this case, the findings here being to the effect that the petitioner is suffering from no disease or other natural cause.

We said in *Caeko v. Stanley Fruit Co.*, 55 Ariz. 72, 98 Pac. (2d) 471, that where the result of an accident is not clearly apparent the question of causal relation of the accident to the condition of the injured party "can usually be answered only by expert medical testimony." This is true. In that case the commission had many different reports, (1) that the petitioner is suffering from a disease known as myasthenia gravis resulting from his accident; (2) his condition is caused by psychoneurosis arising out of the accident, (3) he is a plain malingering, (4) it was produced by hypertrophic arthritis, and (5) that it is the result of an intragastric malignant tumor. Each of these opinions was supported by reputable medical testimony. Obviously, such situation does not exist here. The opinion or conclusion of the medical board, as we have already pointed out, is not supported by the medical testimony or findings. Here, stated in the simplest terms, we have a case where a man has been injured. His disablement continues. The medical experts cannot ascribe his disablement to disease or to any natural cause. They do not set out any medical history which would show or tend to show that his condition did not result from his injury. The medical history indicates that whatever disablement he has is a result of injury. It is the only cause existing.

Since, in our judgment, there is no reasonable evidence supporting the findings of the commission, the award is set aside.

## Book Reviews

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1944. Cloth. Price, postpaid, \$1.00—pp. 238. Chicago: American Medical Association, 1945.

The Council on Pharmacy and Chemistry recently issued the thirty-sixth edition of the Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association. This volume contains in compact form not only the reports of the

**WHEN** *digestive symptoms and general malaise are accompanied by marked downward displacement of the viscera, they are often relieved by ANATOMICAL SUPPORT.*



X-Ray of patient with visceroptosis. (Left) The lesser curvature of the stomach is below the crests of the ilia. (Right) X-Ray of same patient after application of Camp Support for visceroptosis indicating how the viscera is held in a more nearly normal position.

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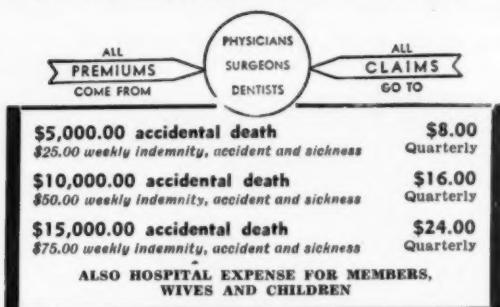


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Council which have been published in THE JOURNAL during the past year but also some additional reports which were not considered of sufficient importance to be published in THE JOURNAL.

The present volume is quite unusual in that it contains not one report concerning a product found unacceptable. However, there are five reports on the omission of products from New and Nonofficial Remedies, mainly for the reason that they have outlived their usefulness, and in most cases the manufacturers have expressed their lack of desire for continued inclusion of their brands. These reports are: Erysipelas Streptococcus Antitoxin and Anti-erysipelas Serum omitted from New and Nonofficial Remedies; Ichthammol Preparations, Isarol, Ichthynat, Ichthyol, omitted from New and Nonofficial Remedies and Soluble Ichthammol, not within the scope of New and Nonofficial Remedies; Iodine Compounds, Iodalbin and Stearodine; Iodo-Casein, Iothion and Iodostarine, omitted from New and Nonofficial Remedies; Mercuric Oxycyanide, Mercuric Salicylate and Mercuric Succinimide, omitted from New and Nonofficial Remedies and Status of Antimeningoococcal Serum and Meningoococcal Antitoxin.

This volume is a veritable mine of information on subjects of general interest to the physician, pharmacist and the pharmaceutical manufacturers. The reports concern deliberations of the Council on general subjects ranging from the use of the Electron Microscope to the appraisal of new drugs. The report on Pathogenic Bacteria, Rickettsias and Viruses as shown by the Electron Microscope is noteworthy as being pioneer work in this field. The report on the Current Status of Prophylaxis by Hemophilus Pertussis Vaccine was prefatory to the acceptance by the Council on various brands of pertussis vaccines and pertussis vaccine combinations. The valuable and highly informative article on Local Treatment of Thermal Cutaneous Burns reports on the latest and best work in this field.

New and Nonofficial Remedies, 1945, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1945. Cloth. Price, postpaid, \$1.50, pp. 780. Chicago: American Medical Association, 1945.

Each year a revised list of the articles which stand accepted by the Council on Pharmacy



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and Chemistry of the American Medical Association as of January first is published in book form under the title "New and Nonofficial Remedies." The book contains the descriptions of acceptable proprietary substances and their preparations, proprietary mixtures if they have originality or other important qualities, important nonproprietary nonofficial articles, simple pharmaceutical preparations, and other articles which require retention in the book.

Some fifteen or twenty newly accepted preparations appear in the 1945 volume. A large number of preparations have been omitted, mainly brands of official preparations. The general statement concerning these pharmacopeial preparations has been retained for the information of physicians.

As stated in the preface, the entire book has been scanned to bring it up to date with the latest medical knowledge. It is noted that the section "Articles and Brands Accepted by the Council But Not Described in N. N. R.," a vestigial remnant of which appeared in the 1944 volume, has now entirely disappeared.

This section appeared to have been a catch-all for brands of official articles, the acceptance of which the manufacturers desired for reasons of prestige, and miscellaneous preparations which were not necessarily or importantly within the Council's scope and which did not require detailed description. Many of the official preparations have been transferred to the body of the book and the others deleted. One is struck by the large amount of medical information contained in this volume. Certainly no other compendium of comparable price contains so much.

"MEN UNDER STRESS (In and After Combat). By LT. COL. ROY R. GRINKER, M. C., Army Air Forces; formerly Fellow of the Rockefeller Foundation and Chairman of the department of Neuropsychiatry, Michael Reese Hospital, Chicago; and MAJOR JOHN P. SPIEGEL, M. C., Army Air Forces, formerly of the Department of Psychiatry, Michael Reese Hospital, Chicago. The Blakiston Company, 1012 Walnut St., Philadelphia 5, Pa. 484 pages, \$5.00. (Published June 20, 1945.)

The authors have fortunately provided the psychiatrist with a fund of knowledge of the reaction of men under stress of war. The book is written with a minimum of vague just-off-the-press psychiatric terms and thus makes it readable for all practitioners of medicine who will find it necessary reading in these times.

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\* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*  
*Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60*

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The reactions of stress of war are evaluated with remarkable insight. The reactions vary from simple anxiety state to psychotic-like behavior and the national disturbances reflected in physical manifestations. These reactions are adequately described with clarity.

The discussion of procedures of therapy used in combat areas where the pressure of time forces the physician to adopt short-cuts is interesting. The therapeutic value of narcoticsynthesis as a short-cut is firmly established as a procedure. The procedure is both investigative and therapeutic.

In the chapter on General Social Implications the authors advance the cause of psychiatry first, by suggesting the modification of length psychiatric diagnosis and a better understanding of psychiatry. Second, by shorter and less time consuming methods of treatment. The authors also pose questions which have been discussed for years without conclusion, in particular, "planned parenthood." The problem of the returning psychiatric casualty is brought in interesting questioning.

This book is well worth the reading.

LOUIS J. SAXE, M. D.

"COMMON AILMENTS OF MAN." Edited by Morris Fishbein, M. D., Editor of the Journal of the American Medical Association, and of Hygeia, the health magazine; Chief Editor of War Medicine. Published by Garden City Publishing Co. Price, \$1.00.

This book, edited by Dr. Fishbein, consists of seventeen chapters, each discussing a subject. The subjects are as the title implies: the common ailments of man, and includes headache, acute colds, sinus trouble, neuritis, hemorrhoids, constipation and various others. Each chapter is discussed by a well-known medical authority in his particular specialty. While the book is written mainly for the lay mind, nevertheless it is worthwhile reading for the general practitioner, and any physician in other than his own specialty, as it brings everything up to date. If any criticism is to be offered, it is that these ailments are discussed with the impression that they are conditions which the human is endowed with to endure. The facts are that with the elimination of the so-called catastrophic illness, these complaints constitute the great bulk of the private practice of medicine, and represent the very place when a regimented or socialized system of medicine will end in a complete dismal failure.

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## BRIEF HISTORICAL NOTES ON MEAD'S CEREAL, PABLUM AND PABENA

**H**AND in hand with pediatric progress, the introduction of Mead's Cereal in 1930 marked a new concept in the function of cereals in the child's dietary. For 150 years before that, since the days of "pap" and "panada," there had been no noteworthy improvement in the nutritive quality of cereals for infant feeding. Cereals were fed principally for their carbohydrate content.

The formula of Mead's Cereal was designed to supplement the baby's diet in minerals and vitamins, especially iron and thiamine. How well it has succeeded in these functions may be seen from two examples:

(1) As little as one-sixth ounce of Mead's Cereal\* supplies over 50% of the iron and 20% of the thiamine minimum requirements of the 3-months-old infant. (2) One-half ounce of Mead's Cereal furnishes all of the iron and 60% of the thiamine minimum requirements of the 6-months-old baby.

That the medical profession has recognized the importance of this contribution is indicated by the fact that cereal is now routinely included in the infant's diet as early as the third or fourth month instead of at the sixth to

twelfth month as was the custom only a decade or two ago.

In 1933 Mead Johnson & Company went a step further, improving the Mead's Cereal mixture by a special process of cooking, which rendered it easily tolerated by the infant and at the same time did away with the need for prolonged cereal cooking in the home. The result is Pablum, an original product which offers all of the nutritional qualities of Mead's Cereal, plus the convenience of thorough scientific cooking.

During the last twelve years, these products have been used in a great deal of clinical investigation of various aspects of nutrition, which have been reported in the scientific literature.

Many physicians recognize the pioneer efforts on the part of Mead Johnson & Company by specifying Mead's Cereal and PABLUM—and also the new Pablum-like oatmeal cereal known as PABENA.

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\*Pablum, the precooked form of Mead's Cereal, has practically the same composition: wheatmeal (farina), oatmeal, cornmeal, wheat embryo, beef bone, brewers yeast, alfalfa leaf, sodium chloride, and reduced iron.

